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ABDOMINAL RADIOLOGY

(336) - PP-001
LIPOMA PANCREAS

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Introduction
Lipoma of the pancreas is a rare benign mesenchymal tumour, only 1-2% of panreatic tumors.

Purpose
CT and MRI allow confirmation of the diagnosis and elimination of other differential diagnoses

Materials and Methods
57years women come on emergency department with epigastric pain . Abdominal ultrasound was normal , because of high level alfa amilase 197 iu/l and lipase 140iu/l he underwent on Ct scanning of the abdomen . Ct scan showed in front aspect pancreatic haed hipodense , well defined fatty (about -100 HU) lesion diametar 3,5x2x3,8cm with internal septae and no contrast enhancement without sign of pancreatitis , infiltration of peripancreatic fatty tissue, and widening of the pancreatic duct and common bile duct. MRI of the abdomen was performed to confirm that the lesion . On MRI lesion has high signal on T1W and T2W sequences with internal septae with signal loss on T2 fat suppressed, without contrast enhancement .

Results
Radiologic folow up patient is sugested for 6-12 months to rule out other possibilities such as liposarcoma , teratoma , lipomatosis . Lipomas have characteristic imaging features which allow a correct diagnosis to be made without the need for histopathological confirmation, except for atypical imaging cases.

Conclusion
Ct and MRI can diagnose fat lesion without the need for biopsy.

(527) - PP-002

MUCOSA-ASSOCIATED LYMPHOID TISSUE (MALT) LYMPHOMA OF THE RECTUM PRESENTING ON MRI AS A LARGE PELVIC MASS: A CASE REPORT

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Introduction

Mucosa-associated lymphoid tissue (MALT) lymphoma is a low-grade B-cell lymphoma that typically arises in the stomach and is rarely found in the rectum. Due to its rarity and nonspecific symptoms, rectal MALT lymphoma often poses a diagnostic challenge.

Purpose

To present a rare case of MALT lymphoma originating from the rectum.

Materials and Methods

We report a case of a 59-year-old immunocompetent man who presented with a three-month history of persistent diarrhea (3–5 times per day), progressive weight loss (~8 kg), fatigue, subfebrile temperature (37.5–38.3 °C), and anorexia. He denied rectal bleeding or tenesmus. Laboratory investigations revealed normocytic anemia and hypoalbuminemia.

Results

MRI of abdomen and pelvis with post-contrast series showed well demarcated massive tumor mass (15 cmx10 cm) in the pelvis involving the rectal wall. MR imaging showed no evidence of systemic involvement. Colonoscopic examination presented circumferential extensive infiltrative form with erosions in rectum without any normal mucosa in-between, length of 23 cm, the rest of the colon was clear. Histopathological analysis of biopsy samples confirmed the diagnosis of extranodal marginal zone B-cell lymphoma of MALT type. Immunohistochemistry demonstrated positivity for CD20 and BCL-2, and negativity for CD10 and cyclin D1. The patient was managed with monotherapy with rituximab (treatment ongoig), followed by reduction of tumor mass, and improvement of patient's condition.

Conclusion

This case highlights the importance of including MALT lymphoma in the differential diagnosis of rectal masses, particularly when imaging features are atypical for more common rectal malignancies. MRI can play a crucial role in identifying mass characteristics, but definitive diagnosis relies on histopathology. Early recognition is essential for appropriate management and favorable outcomes.

(510) - PP-003
DECODING DUODENUM: A PICTORIAL REVIEW

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Introduction
Duodenal lesions are rare, usually incidental findings, oftentimes overlooked by radiologists. Although upper gastrointestinal (UGI) endoscopy is the first line approach, only mucosal and submucosal lesions can be evaluated. Imaging can overcome this limitation enabling diagnosis and more importantly indicating the need for intervention.

Purpose
The purpose of this pictorial review is to summarize the basic imaging characteristics and provide a basic approach to duodenal lesions.

Materials and Methods
We have retrospectively reviewed cases from the archive of the Radiology Department of our hospital with a focus on Computed Tomography Angiography studies with a protocol of enterography. Furthermore, representative cases of Magnetic Resonance Imaging, Endoscopic Ultrasound and UGI Studies have also been retrieved.

Results
Firstly, pancreatic entities, typically affecting the second and third segment of duodenum, should be excluded, followed by duodenal ulcers that most commonly involve the bulb. Next question is whether the lesion contains fat, almost exclusively corresponding to a lipoma, or air, usually accounting for an extraluminal diverticulum. In the setting of recent endoscopic retrograde cholangiopancreatography, air should raise suspicion of perforation and hyperdensity of hemorrhage. Necrotic fluid, meaning more hyperdense than clear fluid, sometimes accompanied by enhancing tissue debris, indicates malignancy. The pattern of growth may also be helpful. Extraluminal lesions may typically be a gastrointestinal stromal tumor (GIST) or a diverticulum. In order to differentiate among diffuse lesions, their effect on the lumen – obstruction or aneurysmal dilatation – is a determinant. Arterial enhancement narrows the differential among pancreatic heterotopias, neuroendocrine tumors, GISTs or rarely metastases. Lastly, accompanying features, such as lymphadenopathy, must be evaluated.

Conclusion
The high demand on imaging, as well as upper gastrointestinal videoendoscopy studies, has increased the incidence of duodenal lesions. Radiologist should be able to discern among them, in order to facilitate further management including interventions, using a structured approach.

(505) - PP-004

MAGNETIC RESONANCE ENTEROGRAPHY. BUILDING AND OPTIMIZING THE EXAM PROTOCOL: A SINGLE INSTITUTION EXPERIENCE OVER 10 YEARS AND LITERATURE REVIEW.

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Introduction

Inflammatory bowel disease (IBD) is a major cause of gastrointestinal disease in the pediatric population. Magnetic Resonance Enterography (MRE) is a widespread technique that has become a first-line imaging modality that allows the evaluation of both intraluminal and bowel wall lesions, as well as other abdominal structures.

Purpose

To combine our department's experience with the existing literature concerning proper patient preparation before the exam, use of different contrast agents and building an optimal examination protocol. To highlight the characteristics of each sequence, its advantages and disadvantages - limitations. To assess other protocol parameters, concerning duration, sedation and the overall optimization as well as retrospectively correlating imaging with endoscopic findings

Materials and Methods

In our institution MRE is performed as the main imaging modality for diagnosis of possible and follow-up IBD cases. A predefined exam preparation and a specific protocol is already in use in the last 10 years. Nowadays, it contains a series of different MR sequences (single-shot T2 fast spin echo, balanced SSFP, T1 3D gradient echo pre-post contrast, DWI/ADC and cine images), tailored to our 3T MRI machine and our hospital needs. Between MRE and endoscopic findings an absolute correlation in excluding IBD with low possibility and a great coincidence in detection or exclusion of relapse in patients with known IBD is identified.

Results

In our institution we have achieved to optimize an MRE protocol with a good correlation with endoscopic findings. In general, the examination protocol is flexible and can be tailored to individual and machine parameters

Conclusion

There is great variability in the protocols used in different institutions, although an attempt is being made by the Society of Abdominal Radiology to create a standardized protocol.

(333) - PP-005

WHEN HEPATOCELLULAR CARCINOMA (HCC) STRIKES BACK. WHAT A RADIOLOGIST SHOULD KNOW ABOUT HCC RECURRENCE AFTER TRANSCATHETER ARTERIAL CHEMOEMBOLIZATION (TACE)

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Introduction

TACE is a cornerstone treatment method for intermediate-stage HCC. According to BCLC guidelines, this therapeutic approach is indicated for patients with unresectable or multinodular tumors who maintain preserved liver function (Child-Pugh A/B). Despite its effectiveness, post-treatment surveillance remains crucial for optimal patient outcomes.

Purpose

To assess the role of imaging in early detection of HCC recurrence after TACE To recognize typical imaging patterns of tumor recurrence

Materials and Methods

Post-TACE imaging surveillance follows a standardized protocol including baseline examination at one month post-procedure, followed by regular assessments every three months, enabling early detection of tumor recurrence and facilitating timely retreatment. Multiple imaging modalities are employed: CT with multi-phase contrast enhancement as primary surveillance tool, MRI for complementary information, and CEUS for additional recurrence detection. Diagnostic radiologists must be aware of the embolization material used (c-TACE/DEB/Lumi beads).

Results

On CT, lipiodol's radio-opaque nature produces characteristic hyperattenuation marking tumor deposition areas, but can obscure residual enhancement detection presenting a diagnostic challenge. MRI offers complementary information with post-TACE changes manifesting as variable signal intensity on T1- and T2-weighted sequences. Diffusion-weighted imaging proves particularly valuable in identifying residual or recurrent tumor through restriction patterns. Following contrast administration, treated areas should demonstrate no extra enhancement, while inflammatory rim enhancement and geographic regional hyperenhancement are common post-procedure findings, potentially persisting up to one year. Recurrence typically manifests as nodular arterial hyperenhancement followed by portal washout, most frequently at the treatment area's periphery. CEUS can similarly detect recurrence through nodular arterial hyperenhancement and portal washout.

Conclusion

Post-TACE surveillance requires vigilant radiological follow-up using multi-phase contrast-enhanced imaging. Radiologists must be familiar with embolization methods and different materials. They should also maintain high suspicion for recurrence while familiarizing themselves with expected post-treatment appearances and recurrence patterns for successful interpretation and timely treatment decisions.

(397) - PP-006

SAPONIFICATION IN PANCREATITIS WITH FAT NECROSIS: INSIGHTS FROM A RADIOLOGIST'S PERSPECTIVE

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Introduction

Pancreatitis is an inflammatory disorder with a variable spectrum of severity, ranging from mild inflammation to extensive necrosis. In necrotizing forms, both pancreatic and peripancreatic tissues can be involved, significantly increasing the risk of complications. Fat necrosis, resulting from saponification of peripancreatic fat, is a notable manifestation of severe disease. Due to its complex presentation, recognizing fat necrosis through imaging is essential for guiding clinical management. Cross-sectional imaging—particularly contrast-enhanced CT and MRI—plays a vital role in both the early detection of fat necrosis and in the evaluation of delayed complications when the clinical course is unfavorable.

Purpose

This study aims to enhance understanding of the pathophysiology and clinical presentation of fat necrosis in necrotizing pancreatitis. It also seeks to outline the current imaging-based classification and diagnostic features by showcasing illustrative cases from our institution.

Materials and Methods

We present a series of 10 cases of necrotizing pancreatitis diagnosed between December 2021 and May 2025 at our center. Imaging was performed using a 320-detector row, 640-slice CT scanner with intravenous contrast, employing either a pancreatic or portal venous phase protocol depending on the clinical scenario.

Results

We illustrate hallmark CT features of fat necrosis, including linear fat stranding, areas of increased attenuation, heterogeneous peripancreatic fat changes, and well-defined fluid collections. Two cases involved secondary peripancreatic abscesses managed with CT-guided percutaneous drainage.

Conclusion

Fat necrosis in the context of necrotizing pancreatitis poses significant diagnostic and therapeutic challenges. Prompt recognition through imaging and appropriate intervention can mitigate the risk of serious complications and improve patient outcomes.

(511) - PP-007
PERIGASTRIC APPENDAGITIS: A RARE MIMICKER UNVEILED

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Introduction
Perigastric appendagitis (PA) corresponds to torsion with subsequent ischemia and necrosis of the fatty appendages of perigastric ligaments, namely the falciform, gastrohepatic and gastrosplenic. PA is a rare cause of severe abdominal pain that may be misdiagnosed as other common causes of acute abdomen. Imaging is vital not only in excluding such causes, but also in raising the suspicion of PA.

Purpose
The purpose of this case report is to summarize the imaging findings of PA, in order to avoid misdiagnosis and unnecessary interventions.

Materials and Methods
A 44 – years – old, female with known history of systemic lupus erythematosus presented with incipient epigastric pain along with a significant increase of C – reactive protein. After ultrasonography revealed no hepatobiliary pathology, an abdominal computed tomography (CT) was performed. The most striking feature was the fat stranding within the falciform ligament along the proximal part of the round ligament, as well as within the gastrohepatic recess. Except for a mild thickening of the pyloric wall, the rest of the examination was unremarkable. Subsequently, conservative management for PA with anti – inflammatory drugs and antibiotics was followed. After clinical remission, follow – up imaging exhibited total resolution of the findings.

Results
PA is characterized by fat stranding along the perigastric ligaments in CT, corresponding to inflammation due to ischemia and necrosis, namely signs typical of fat infarction. It may be accompanied by a hyperdense rim, representing peritoneal thickening, and a central dot, representing a thrombosed vein. Ultrasonography may reveal a hyperechoic mass, while MRI exhibits signs of inflamed fat on T1 and T2 sequences, and sometimes restricted diffusion.

Conclusion
The diagnosis of PA must be made by radiologists, due to its non – specific clinical course that mimics other causes of acute abdomen. Therefore, despite its rarity, radiologists should be aware of this condition.

(307) - PP-008
UPPER GASTROINTESTINAL BLEEDING CASE REPORT

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Introduction
Upper gastrointestinal bleeding (UGIB) is defined as bleeding proximal to the ligament of Treitz. Blood may be observed as hematemesis and melena, and in 15% of patients as fresh blood passed per rectum. Depending on the amount of the blood loss, symptoms may include anemia or patient can have symptoms of shock. UGIB has diverse etiology like: esophagitis, gastritis, duodenitis, pancreatitis; esophageal, gastric and duodenal ulcer; Mallory-Weiss tear, neoplasms, varices, vascular malformation etc. In patients with massive or recurrent gastrointestinal bleeding, intervention is required to identify the source of bleeding and stop the hemorrhage. Diagnose is made by endoscopy, scintigraphy, standard MDCT scan of the abdomen or MDCT enterography or MDCT angiography, as well as catheter angiography.

Purpose
This case shows us that when UGIB is suspected and endoscopy or interventional radiology is unviable, standard MDCT scan of the abdomen can revile the place of active hemorrhage of UGIT.

Materials and Methods
Patient was a case of global respiratory failure. Prescribed therapy was systemic corticosteroids, IPP, parenteral and inhalation therapy, protective doses of low molecular weight heparin, vitamins, Azaran. After 5 days of therapy he had profuse fresh bleeding in his stool. Considering that the bleeding recurred and that the hemoglobin was falling during the treatment, MDCT scan of the abdomen and pelvis with contrast administration was performed due to suspicion of rectal cancer.

Results
Standard MDCT scan of the abdomen and pelvis with contrast administration was reviled dilated stomach with endoluminal sentinel clot related to active bleeding from posterior wall of stomach, seen as contrast extravasations during arterial phase and changing in size, attenuation, and shape in the portal venous phase.

Conclusion
MDCT scan of the abdomen with contrast administration can reviled the place of active bleeding in UGT.

(535) - PP-009

ROLE OF ULTRASONOGRAPHY IN THE DIAGNOSIS OF CYSTIC ECHINOCOCCOSIS: A CASE REPORT

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Introduction

Cystic Echinococcosis, the most prevalent parasitic zoonosis affecting the liver, is caused by the larval stage of tapeworms that belong to the genus Echinococcus Granulosus. Individuals with this condition may remain asymptomatic for years, with symptoms only emerging when the cysts gradually exert mechanical pressure on surrounding tissues or rupture. Initial manifestations often include general abdominal discomfort, appetite loss, a palpable abdominal mass and abdominal distension.

Purpose

We present the case of a newly diagnosed patient to illustrate the utility of ultrasonography in identifying and staging Cystic Echinococcosis.

Materials and Methods

A 54-year-old woman presented to the emergency department experiencing left upper abdominal quadrant pain that radiated to the lumbar region. An ultrasound of the upper and lower abdomen was requested, and further examination was conducted with a contrast-enhanced CT scan.

Results

The initial ultrasound revealed two cystic lesions situated in the liver. Lesion A (11.8 cm in diameter) was a unilocular cyst with anechoic contents and echogenic deposits suspended within the fluid. Lesion B (5.6 cm in diameter) exhibited a double, thickened cyst wall while containing smaller - daughter cysts embedded within, adjacent to its inner lining. The contrast-enhanced CT scan depicted a large multi-compartmental cystic lesion with thick-walled septa internally and a second unilocular cyst with a thickened wall, within the hepatic parenchyma. These observations, correlating with the patient's history, were consistent with Cystic Echinococcosis, with the two formations representing distinct cystic stages of the infection.

Conclusion

This case demonstrates that ultrasonography is appropriately regarded as the preferred imaging modality for both diagnosing and determining the stage of Cystic Echinococcosis. Its findings can be comparable to those of a CT scan, while offering a more readily available imaging technique without the risk of adverse side effects from radiation.

(323) - PP-010

PATIENTS WITH PAINLESS JAUNDICE AND WEIGHT LOSS DIAGNOSED WITH INTRADUCTAL PAPILLARY MUCINOUS NEOPLASMS: PATHOLOGIC-RADIOLOGIC CORRELATION

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Introduction

Two patients presented to the emergency department mentioning sudden onset painless jaundice and moderate weight loss for the past few months. Imaging and endoscopy revealed a possible diagnosis of Intraductal Papillary Mucinous Neoplasm (IPMN) of the pancreas.

Purpose

To highlight the common and uncommon characteristics of the spectrum of IPMN lesions and differentiate their types according to imaging patterns and pathologic findings.

Materials and Methods

A 69-year-old male (patient 1), an 80-year-old male (patient 2) and a 50-year-olf female (patient 3) presented with painless jaundice, fatigue and weight loss underwent imaging with computed tomography (CT) and magnetic resonance imaging (MRI) with a cholangiographic (MRCP) protocol. Patient 1 was diagnosed with an enlarged pancreatic head with a multiloculated cystic lesion in the head and uncinate process. Endoscopy confirmed the presence of a cystic lesion in the area excreting mucous through the Ampulla of Vater. Ultrasonography (US) and endoscopic ultrasound (EUS) of patient 2 revealed a septated cystic lesion involving the pancreatic head and uncinate process, marked dilatation of the bile ducts and the main pancreatic duct. Imaging in patient 3 revealed an extensive and uniform main pancreatic duct dilatation with enlargement and edema of the pancreatic parenchyma. A subsequent Whipple procedure was performed in both patients 1 and 2 while patient 3 underwent endoscopic biopsy, with histology confirming the diagnosis of IPMNs.

Results

IPMNs are infrequent neoplasms arising from the epithelial lining of the pancreatic ducts which secrete and retain mucin. They are divided into three types according to the pattern of branches which are dilated. US, CT, MRI/MRCP and EUS are the main imaging modality combinations in assessing the anatomy and complexity of the lesions. Surgery remains the main therapeutic approach.

Conclusion

IPMNs are a relatively rare but significant pancreatic malignancy with different patterns in imaging.

(536) - PP-011

MULTI-MODALITY IMAGING FOR THE DETECTION OF COLORECTAL ADENOCARCINOMA: A CASE REPORT

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Introduction

Colorectal cancer is the third most frequently diagnosed cancer and the second most common cause of cancer mortality. Adenocarcinoma, in particular, a subtype of colorectal cancer, accounts for over 90% of colonic malignancies. The most common site for metastasis is predominantly the liver, followed by the lungs and distant lymph nodes. Multi-modality imaging (US, CT, PET/CT) is essential for reaching a preliminary diagnosis and contributes to resectability assessment.

Purpose

To illustrate the critical role of initial radiological assessment in the timely diagnosis and characterization of suspected colorectal adenocarcinoma in an acute clinical setting.

Materials and Methods

A 70-year-old male presented to the emergency department with epigastric pain and pyrexia. Initial evaluation included abdominal ultrasound and subsequent non-contrast CT scan. Following imaging findings, a colonoscopy was performed and multiple cecal biopsies were taken and sent for histological analysis.

Results

Abdominal ultrasound revealed a localized hypoechoic mass in the right iliac fossa, adjacent to the cecum and appendix, with circumferential colonic wall thickening. Non-contrast CT confirmed a cecal lesion with bowel wall thickening and extensive fat stranding. Additionally, a 5-cm hypoattenuating lesion in liver segment IV and numerous para-aortic and mesenteric lymph nodes were indentified. Preliminary histological findings suggested an infiltrating adenocarcinoma.

Conclusion

This case highlights the importance of fully utilizing readily available multi-modality imaging (e.g., ultrasound and CT) in the emergency department of a tertiary hospital. Given that a significant proportion of newly diagnosed colorectal cancer patients (approximately 20-22%) present with active metastases, as observed in this patient, and that aggressive therapeutic interventions, such as extensive bowel resection, are often required, prompt detection of the lesion can be a decisive factor in determining the course of care, distinguishing between therapeutic and palliative approaches.

(483) - PP-012

THE BOWEL REPORT: THE ROLE OF GASTROINTESTINAL ULTRASOUND IN THE ASSESSMENT OF INTESTINAL PATHOLOGIES

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Introduction

Gastrointestinal ultrasound (GIUS) has evolved into a valuable, non-invasive diagnostic modality for evaluating intestinal pathologies. While its utility is well-established in acute care, GIUS is increasingly recognized for its role in routine clinical assessments of chronic and subacute bowel conditions.

Purpose

To demonstrate the effectiveness of GIUS in identifying a wide spectrum of intestinal pathologies across both emergency and non-emergency settings and to highlight its contribution to comprehensive patient management.

Materials and Methods

This educational exhibit presents a curated series of GIUS cases involving various intestinal pathologies. Cases include inflammatory bowel disease (IBD), diverticulitis, appendicitis, along with complications fistula or abscess formation, intussusception, ischemic enteritis, clostridium difficile colitis and incidental neoplasms. High-resolution ultrasound imaging, performed with graded compression techniques and Doppler evaluation, was used to capture characteristic sonographic features of each condition.

Results

GIUS proved effective in identifying key features such as bowel wall thickening, altered peristalsis, intraluminal contents, vascularity changes, and complications like abscesses or fistulas. In IBD and diverticular disease, GIUS provided reliable monitoring of disease activity. In acute settings, it aided in swift triage, while in routine practice, it offered valuable insights for follow-up and treatment planning. Rare but critical findings, including neoplastic lesions and adult intussusception, were also successfully detected.

Conclusion

GIUS is a versatile and dynamic imaging tool, offering real-time, bedside evaluation of intestinal conditions. Its applicability in both urgent and routine clinical scenarios enhances diagnostic confidence, expedites decision-making, and reduces reliance on more invasive or costly modalities. Incorporating GIUS into standard intestinal imaging workflows has the potential to significantly improve patient outcomes.

(446) - PP-013

DUODENAL STUMP LEAK - INDIRECT RADIOLOGICAL SIGNS: A CASE REPORT

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Introduction

Duodenal stump leak (DSL) is a rare but serious postoperative complication, occurring in 1.6% to 5% of patients following Billroth II or Roux-en-Y reconstruction after gastrectomy for gastric cancer. Reported mortality rates range from 7% to as high as 67%.

Purpose

To present a case of DSL as a rare, life-threatening postoperative complication and to highlight the indirect radiological signs observed on computed tomography (CT).

Materials and Methods

A 74-year-old male patient underwent subtotal gastrectomy with Roux-en-Y reconstruction for gastric cancer and a polyp. The duodenal stump was closed using a linear stapler and reinforced with an over-sewn suture. On the thirteenth postoperative day, a CT scan was performed due to the patient's pain localized beneath the right costal margin.

Results

CT imaging revealed a small fluid collection with surrounding fat stranding and gas inclusions near the duodenal stump suggestive of an indirect sign of leak. Due to clinical deterioration, reoperation was performed, confirming a duodenal stump leak and adjacent fluid accumulation.

Conclusion

DSL remains a diagnostic challenge in the early postoperative period, often mimicking normal postoperative changes. Awareness of this complication and careful radiological assessment are crucial. Prompt diagnosis and surgical intervention are essential due to the aggressive nature of pancreaticobiliary secretions and the associated high risk of morbidity and mortality.

(362) - PP-014

CLINICAL IMPORTANCE OF ACCURATE EVALUATION OF DIVERTICULAR DISEASE COMPLICATIONS – ROLE OF THE RADIOLOGIST

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Introduction

Diverticular disease is an entity with increasing prevalence, especially in Western countries. Complications include mainly inflammation and hemorrhage. CT is the modality of choice to assess their severity and guide further management.

Purpose

1)To describe key imaging features that differentiate each stage of diverticulitis (according to Hinchey classification) 2)To discuss types and CT findings of diverticular bleeding 3)To correlate radiological evaluation and optimal treatment selection

Materials and Methods

The presentation includes MDCT scans of patients with diverticular disease complications from our emergency department.

Results

Mild diverticulitis may present as segmental thickening of the colonic wall (Hinchey 0) or fat stranding surrounding an inflamed diverticulum (Hinchey Ia). Conservative treatment with oral or intravenous antibiotics is usually sufficient. Intramural or pericolonic abscess formation (Hinchey Ib), as well as distal or pelvic abscesses (Hinchey II) may necessitate CT guided percutaneous drainage. Abscesses contain low attenuation debris, air – fluid levels and they have enhancing walls. Diverticular rupture with presence of contained or free intraperitoneal air, bowel obstruction and peritonitis (Hinchey III and IV) represent the most severe stages. Ascites and peritoneal thickening can be observed in cases of peritonitis. Chronic or recurrent diverticulitis may lead to stenoses or formation of fistulae. Surgical consultation is required in stages III and IV and in some cases of recurrent diverticulitis. Diverticular hemorrhage can be observed in CTA as intraluminal active contrast extravasation or may not be detected in cases with minimal bleeding. Intermittent nature of hemorrhage reduces CT sensitivity. Extravasation of contrast is recognized as intraluminal pooling of contrast that increases in size in delayed phases. Identification of a bleeding site can be followed by transarterial embolization.

Conclusion

Radiologists are at the center of staging diverticulitis and assessing active diverticular hemorrhage. Thorough and timely evaluation guides and improves patient management.

(540) - PP-015

MDCT EVALUATION OF SIMULTANEOUS PANCREAS-KIDNEY TRANSPLANTATION.

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Introduction

Simultaneous pancreas-kidney (SPK) transplantation is a well-established treatment for patients with complicated diabetes mellitus and advanced renal failure during the last decades. The pancreas graft is positioned in the right pelvic region and the kidney graft is positioned in the left iliac fossa. This surgical procedure carries a variety of early and late postoperative complications, thus long patient surveillance is required. Complications are vascular, parenchymal (pancreatic or renal) and intestinal. There are also complications associated to immunosuppression, which can lead to acute or chronic rejection. Clinical signs and laboratory findings can raise the suspicion of postoperative complications, without direct correlation in most of cases. Multidetector Computed Tomography (MDCT) plays an important role in the depiction of postoperative complications following SPK transplantation.

Purpose

The presentation of MDCT findings following SPK transplantation, with emphasis on MDCT postoperative SPK anatomy and MDCT surveillance for prompt detection of complications, in order for immediate therapeutic response.

Materials and Methods

We report two patients with complicated diabetes mellitus and advanced renal failure which underwent SPK transplantation.

Results

MDCT anatomy post SPK transplantation and complications are presented.

Conclusion

SPK transplantation is a rare procedure which represents a viable therapeutic option. The most commonly used surgical technique involves the performance of vascular and enteric anastomoses. Radiologists should be aware of the characteristics of those anastomoses, as well as of their imaging aspects, which are fundamental for guiding the postoperative management of transplant recipients.

(328) - PP-016
AZYGOS CONTINUATION OF THE INFERIOR VENA CAVA

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Introduction
Interruption of the inferior vena cava (IVC) with azygos continuation is a rare congenital vascular anomaly with a prevalence of <0.3% in the general healthy population. It is characterized by the absence of the hepatic segment of the IVC, with the post-renal IVC continuing as the azygos and hemiazygos veins. Typically asymptomatic, it is most often incidentally discovered during imaging. Awareness of this condition is crucial due to its implications for interventional and surgical procedures, as well as radiological interpretation.

Purpose
To report an interesting case of incidentally identified azygos continuation of the IVC on cross-sectional imaging and discuss the associated radiological features and clinical implications.

Materials and Methods
A 59-year-old male presented to the outpatient clinic for a post-infectious pneumonia workup. A chest and abdomen non-contrast CT scan was performed.

Results
Imaging revealed absence of the hepatic segment of the IVC, with venous return from the lower body redirected through a dilated azygos vein into the superior vena cava (SVC). The findings were consistent with azygos continuation of the IVC. There were no concomitant symptoms or clinical signs attributable to the anomaly. No immediate intervention was required. The anomaly was documented for future reference.

Conclusion
Azygos continuation of the IVC, although rare, should be recognized especially in asymptomatic patients in order to guide appropriate planning for surgical and interventional procedures. Moreover, it is essential to differentiate an enlarged azygos vein from mediastinal masses or lymphadenopathy, particularly at the confluence with the SVC and in the retrocrural space. Multi-detector CT technique is the preferred method for identifying this vascular variant.

(393) - PP-017

DIAGNOSTIC CONTRIBUTION OF COMBINED ORAL AND INTRAVENOUS CONTRAST USE: A RARE CASE OF LARGE GIST WITH GASTRIC FISTULA FORMATION

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Introduction

GISTs may present with nonspecific findings or complications. In complex cases, contrast agent selection and timing play a key role in diagnosis. This case highlights the value of combined oral and intravenous contrast-enhanced CT in detecting fistula and metastatic spread in a large mass.

Purpose

To demonstrate the importance of appropriate contrast agent selection and timing in the radiological assessment of complex intra-abdominal masses.

Materials and Methods

The diagnostic process included three consecutive CT scans: first with IV contrast only, then with oral contrast only due to nephrotoxicity concerns, and finally with combined oral and IV contrast. Endoscopy and histopathology were also performed to confirm the diagnosis.

Results

A 63-year-old male presented to the emergency department with abdominal pain and melena. Initial CT with intravenous contrast revealed a large heterogeneous mass containing air densities, confined to the peritoneal surfaces, and communicating with the stomach via a 2 cm defect. A contrast-enhancing lesion in the left liver lobe was also noted. These findings were initially interpreted as an intra-abdominal abscess secondary to gastric perforation, possibly accompanied by liver abscess or metastasis. Due to nephrotoxicity risk, oral contrast-only CT was performed the same day, showing extraluminal gastric content leakage. Urgent endoscopy revealed a large mucosal defect and a suspected fistulous tract. Two days later, combined oral and IV contrast CT confirmed the fistula between the mass and the stomach. Histopathology established the diagnosis of gastrointestinal stromal tumor.

Conclusion

In large intra-abdominal masses with fistula formation, accurate diagnosis relies on both the timing and combination of contrast agents. Combined oral and IV contrast can significantly aid in diagnosing GIST and similar tumors.

(340) - PP-018
GALLBLADDER DUPLICATION

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Introduction
Duplication of the gallbladder is a rare congenital anomaly, occurring in approximately 1 in 3800 individuals, more frequently in women. It involves the presence of two gallbladders, each with variable cystic duct anatomy.

Purpose
We report a case of true gallbladder duplication in a 30-year-old female presenting with recurrent epigastric and right upper quadrant pain, aiming to emphasize the diagnostic approach and clinical importance of identifying this anomaly preoperatively.

Materials and Methods
A 30-year-old Caucasian female was referred for evaluation of recurrent epigastric and right upper quadrant pain lasting three months. Physical examination revealed slight tenderness in the right upper quadrant, with no fever or abnormal lab findings. Ultrasonography showed two cystic structures in the gallbladder fossa: a normal gallbladder and a second with a thickened wall containing echogenic material. Magnetic Resonance Cholangiopancreatography (MRCP) was performed, revealing two separate gallbladders with individual cystic ducts that converged in a Y-shaped formation before joining the common bile duct. The patient underwent surgery, confirming the duplicated gallbladder.

Results
The diagnosis of true gallbladder duplication (Y-duplication type) was established based on imaging and surgical findings. Differential diagnosis included other cystic structures of the gallbladder fossa, which were ruled out by detailed imaging.

Conclusion
Gallbladder duplication is a rare anomaly with important surgical implications. Accurate preoperative diagnosis, especially with MRCP, is essential to prevent missed accessory gallbladders and avoid reoperation. Surgeons should be aware of this anomaly to ensure complete removal during cholecystectomy and reduce postoperative complications.

(359) - PP-019
BILIARY TREE IMAGING- WHAT THE NONE RADIOLOGIST NEEDS TO KNOW

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Tsvetelina Teneva

Introduction
Biliary tree, gall bladder, liver and portal structures are in close anatomical and physiological relation. It may become challenging to differentiate origin of the pathological finding when it comes to imaging.

Purpose
Purpose of this presentation is educational based on literature review.

Materials and Methods
Literature review about biliary tree imaging in the data base of Scopus, for the period of time 2010-2025, with key words "biliary", "biliary imaging", "cholecystitis", "choledoholithiasis", "cholangiocarcinoma" and others. Resourses such as full text articles, monocentric articles, case reviews and original articles were scanned and artificial intelligence tool Scopus AI was used to accelerate and combine the retrieved information.

Results
Biliary imaging includes different techniques, starting with ultrasound as the first-line imaging modality of choice, often used from none radiologists, then proceeding to specialized imaging methods as cross-sectional or tomography imaging – computed tomography CT and magnet-resonance imaging MRI, ending with high-specialized invasive radiological procedures as endoscopic retrograde pancreatocholangiography ERCP and percutaneus trashepatic cholangiography PTC. Positron emission tomography PET scan and endosonography are additional imaging studies to be mentioned. Different imaging approach is set to different clinical scenarios. Jaundice is the most common biliary/liver disease and the most important question is whether the icterus is obstructive or non-obstructive. If the biliary tree pathology is indicated for surgical treatment is another important question. Sonographic Murphy's sign, pericholecystic fluid, stones are important imaging findings. Choledocholithiasis and cholangitis are key findings on US, CT, and MRCP. Cholangiocarcinoma, hepatocellular carcinoma and even benign tumors of liver and biliary tree are often indistinguishable and imaging features on MRI and CT, especially on contrast-enhanced techniques should be taken into consideration.

Conclusion
The researched data were used for educational purposes aimed at medical students, residents in Radiology and non-radiological specialists.

(539) - PP-020

SPECTRUM OF ABDOMINAL MDCT FINDINGS IN PRIMARY CHOLECYSTOENTERIC FISTULAS.

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Introduction

Primary cholecystoenteric fistulas (PCF) are defined as abnormal communication between the gallbladder and the gastrointestinal tract, which occur as a rare complication of acute cholecystitis or neoplasia. PCF can present with intestinal obstruction due to gallstone impact via a fistula (gallstone ileus), or gastric outlet obstruction when a gallstone is impacted in the duodenum or stomach via a fistula (Bouveret syndrome). Cholecystoenteric fistulas were included in the classification of Mirizzi syndrome and are further classified as cholecystogastric, cholecystoduodenal, cholecystocolic, cholecystocholedochal and choledochoduodenal.

Purpose

The aim of our study is to identify and highlight the great diversity of cholecystoenteric fistula imaging findings, demonstrated on abdominal Multidetector Computed Tomography (MDCT).

Materials and Methods

Our retrospective study includes 11 patients with a mean age of 74 years, over a period of seven years. Symptoms as abdominal pain notably in the region of the right hypochondrium, fever, vomiting or anorexia were observed. Significant elevation of inflammatory markers was also documented. MDCT revealed cholecystogastric, cholecystoduodenal and cholecystocolic fistulas. Two cases of gallstone ileus were also recorded.

Results

MDCT identified the PCFs and their cause in all patients (gallstones and neoplasias) and indicated the level of gastrointestinal tract obstruction. The presence of air in the bile vessels was also assessed. All cases were treated surgically. The diagnostic and therapeutic management of the study group was recorded and analyzed.

Conclusion

We present the divergent findings of PCFs as well as gallstone ileus, on abdominal MDCT, which were subsequently confirmed surgically. Although PCFs are rare, they must carefully recognized and reported by radiologists, so that the most appropriate treatment can be selected for the welfare of the patients.

(341) - PP-021

CROHN'S DISEASE IN THE TERMINAL ILEUM WITH AN ILEO-ILEAL FISTULA: RADIOLOGIC–PATHOLOGIC CORRELATION

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Introduction

Crohn's disease (CD) is a chronic inflammatory bowel disease that often affects the terminal ileum. It can present with a spectrum of pathological features including inflammation, fibrostenosis, and fistula formation. Accurate imaging is essential for diagnosis and classification.

Purpose

To demonstrate the diagnostic value of bowel ultrasonography (US) in evaluating terminal ileum involvement in Crohn's disease, with emphasis on its ability to detect fibrotic thickening and fistulizing complications, and to correlate imaging with surgical findings.

Materials and Methods

A 36-year-old woman with a 3-year history of small bowel CD presented with persistent crampy abdominal pain, diarrhea, weight loss, and malnutrition. Bowel US was performed prior to surgery. Imaging findings were compared with histopathological results from the surgical specimen. Key US findings included marked wall thickening due to fibrosis and the presence of an ileo-ileal fistula surrounded by inflammatory tissue.

Results

US revealed severe mural thickening of the terminal ileum and a fistulous tract consistent with an ileo-ileal fistula. These findings were confirmed intraoperatively and histologically. US findings correlated with pathologic evidence of fibrosis and mucosal inflammation. The echopattern at the stricture level helped differentiate between fibrotic and inflammatory changes: preserved stratification indicated fibrosis, while loss of stratification suggested inflammation.

Conclusion

Ultrasonography is a valuable, non-invasive tool in the initial assessment and follow-up of Crohn's disease. It offers important information regarding disease activity and complications, such as strictures and fistulas. In this case, US demonstrated high concordance with surgical pathology and supported its role as a reliable, accessible imaging modality in everyday clinical practice.

(387) - PP-022
RADIATION-INDUCED LIVER DISEASE AFTER BREAST CANCER TREATMENT

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Introduction
RILD is allegedly causing sinusoidal congestion, intraluminal thrombi and progressive fibrotic changes. Potential risk factors include an underlying B or C hepatitis, chemotherapy which acts as a radiosensitizer and fatty liver disease. Increased focal area of radiation and high dosage are directly implicated. The CT findings display a hypodense area in NECT that affects more than one liver parts. These are hyperattenuating in early arterial phase and are mostly hypoenhancing in the portal phase. A delayed scan may reveal uptake of the contrast by the fibrotic parts of the lesion. No mass effect or infiltration of adjacent tissues is observed.

Purpose
Occasioned by a female patient presenting with RILD after radiation treatment for locally advanced disease, we aim to highlight the computed tomography imaging characteristics of radiation-induced liver disease.

Materials and Methods
A 58-year-old female patient presents to the ED with right upper quadrant pain and double the normal limit rise in LFTs, especially in ALP and ALT levels. Five weeks earlier, the patient had undergone radiation therapy for locally advanced right breast cancer. A three-phase CT scan was performed to investigate the underlying disorder.

Results
The unenhanced CT images demonstrated a hypodense area affecting mostly liver parts VII and VIII, which were subsequently enhancing in the arterial phase with small areas of hypoattenuation within, and mostly heterogeneous and hypoenhancing in the portal-phase. While rare, a diffuse intrasinusoidal hepatic metastasis could not be ruled out. However, the lack of ischemic areas and the proximity of the affected liver to the radiation ports drove the diagnosis towards the RILD end of the differential spectrum. The patient remains on a close follow-up, while the LFTs gradually return within normal limits.

Conclusion
An RILD should be considered in a patient after right-breast cancer radiation treatment, with newfound liver dysfunction, while proper CT protocol can guide to the right diagnosis.

(344) - PP-023

CAPSULE RETENTION IN A GIANT MECKEL'S DIVERTICULUM CONTAINING MULTIPLE ENTEROLITHS HISTOPATHOLOGIC-RADIOLOGICAL CORELATION

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Introduction

A 58-year-old man underwent a routine wireless capsule endoscopy (WCE) after presenting with melena. Though a common adverse event, capsule retention in this case was attributed to a giant Meckel's diverticulum after computed tomography (CT), open surgery and histological examination.

Purpose

This case report aims to showcase a rare phenomenon of capsule retention. A common adverse effect of WCE, the location of the retention can vary. While CT images alone are worthwhile the combination of endoscopic imaging and the live surgical view offer a unique perspective.

Materials and Methods

-WCE (PillCam-SB2; Given Imaging, Yoqneam, Israel) -CT -Histopathologic examination Patient presented to the hospital with diffuse abdominal pain, melena, and iron-deficiency anemia. Gastroscopy and colonoscopy were unremarkable. WCE was then carried out. The video sequence showed the capsule passing through a narrow orifice of the distal ileum into a cavity containing multiple enteroliths swirling in a greenish fluid with debris. Computed tomography (CT) demonstrated a dilated part of the small intestine (10cmx6cmx11cm) containing a hyperdense foreign body - the WCE - and multiple ovoid structures each with a tich rim of intermediate density and low density center. The patient was operated on and the capsule surrounded by four enteroliths was found within the giant enteral diverticulum. Histological examination confirmed the presence of a Meckel's diverticulum.

Results

Endoscopic images showcase the diverticulum and the enteroliths, which can be correlated with the CT findings.The operating room view confirms the diagnosis. Capsule retention in Meckel's diverticulum is a rare but realistic possibility.

Conclusion

This case ,to our knowledge, is one of the few (11) documented reports of capsule retention in a Meckel's diverticulum and possibly the only one where the presence of enteroliths is confirmed.

(345) - PP-024

EXTENDED SECONDARY SCLEROSING ENCAPSULATING PERITONITIS (ABDOMINAL COCOON).

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Introduction

Presenting the following case report as a typical manifestation of an uncommon complication. A 39-year-old woman presented with progressive diffuse abdominal pain. Patient history includes peritoneal dialysis for renal failure. Computed tomography (CT) findings show typical signs of sclerosing peritonitis (SP).

Purpose

This case report aims to showcase a typical yet extended secondary sclerosing encapsulating peritonitis or abdominal cocoon. A well documented complication of peritoneal dialysis, SP of this magnitude should be highlighted as the low incidence of 0.6-7.3% make CT images of this kind highly informative.

Materials and Methods

-Computed Tomography. A 39-year-old woman presented with progressive diffuse abdominal pain, nausea, vomiting, diarrhea, and weight loss. The patient was under continuous ambulatory peritoneal dialysis for renal failure. The patient underwent abdominal contrast enhanced CT which showcased typical yet severe signs of SP: peritoneal thickening and calcification, increased density of the mesenteric fat, loculated fluid collections, small bowel tethering and signs of (incomplete) intestinal obstruction. Based on the patient history and the CT findings, the diagnosis was sclerosing peritonitis (SP) also known as sclerosing encapsulating peritonitis, or encapsulating peritoneal sclerosis, or abdominal cocoon.

Results

CT is the modality of choice in disclosing SP. In our extreme case the calcification extends in every compartment of the abdomen minus the retroperitoneal space forming the aforementioned characteristic cocoon. The extent of the findings are rare and showcase a fringe case.

Conclusion

This case report of an extended secondary sclerosing encapsulating peritonitis presents an excellent example of this uncommon complication. The CT being the gold standard for the diagnosis of SP makes our extreme findings in this patient more than typical for future references.

(467) - PP-025

EVALUATION OF INTESTINAL ULTRASOUND IN MONITORING ACTIVITY OF CROHN'S DISEASE

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Introduction

Crohn's disease (CD) is characterised by chronic inflammation of gastrointestinal tract with oscilliating evolution, presented with periods of activity and periods of remission. That is why patients with Crohn's disease need frequent evaluations. Colonoscopy is the gold standard diagnostic tool for monitoring Chron's disease evolution, but it is expencive, invasive and not well tolerated by patients. Among the imaging techniques, bowel ultrasound, magnetic resonance enterography and computed tomography enable examination of these patients. Bowel ultrasound has advantages over the other techniques, in its accessibility, immediacy, non-invasive character, the absence of radiation, its low cost and good tolerance by patients.

Purpose

Purpose of this study is to evaluate accuracy of ultrasound as a non-invasive method for monitoring Crohn's disease activity.

Materials and Methods

In this study we included 50 patients with diagnosed Crohn's disease, where all colon and terminal ileum could be examined. First, colonoscopy was performed, and then, an experienced radiologist performed intestinal and bowel ultrasound in two weeks. The ultrasound findings that were analyzed were bowel wall thickness (BWT) and intestinal wall hyperemia. The cut-off point for BWT was 3 mm. For hyperemia we used modified Limberg scale – grade 2 and 3 were considered as positive.

Results

In this group, there were 41 patients with positive findings of CD on colonoscopy, and 9 patients had no evidence of disease. Examining the same group by ultrasound, we found both increased bowel or intestinal wall thickness and hyperemia in 36 patients and in 14 patients there was missing one or both signs of disease. Ultrasound sensitivity was 85.4% and specificity 88.9 %.

Conclusion

Intestinal ultrasound is a valuable tool for monitoring CD activity. It is accurate, fast, non-invasive and radiation free, and well tolerated by patients.

(330) - PP-026

IMAGING OF EPIPLOIC APPENDAGITIS OF THE APPENDIX: A CASE REPORT

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Introduction

Epiploic appendagitis is a rare, benign and self-limiting inflammatory condition of the epiploic appendages. It can clinically mimic other acute abdominal conditions, particularly appendicitis. Accurate diagnosis relies heavily on imaging findings and is essential to avoid unnecessary surgical intervention.

Purpose

To present an interesting case of epiploic appendagitis involving the vermiform appendix and to highlight the characteristic findings on ultrasound and computed tomography.

Materials and Methods

A 52-year-old woman presented to the emergency department with a 10-hour history of right lower quadrant pain. She was afebrile and reported no additional symptoms. On physical examination, the abdomen was soft, non-distended with tenderness on deep palpation in the right lower quadrant. Laboratory tests were unremarkable. The patient initially underwent an ultrasound examination of the right iliac fossa, followed by a contrast-enhanced CT scan of the abdomen.

Results

Ultrasound, performed with Philips Affinity 50, revealed a well-defined hyperechoic area consistent with inflamed fat adjacent to the distal (blind-ending) tip of the appendix. The appendix was of normal diameter and wall thickness. CT scan, performed using Philips Brilliance 64, demonstrated in the same area a round fat-density lesion, surrounded by hyperdense linear strands consistent with inflammatory changes, with the appendix appearing normal. The findings were compatible with epiploic appendagitis of the appendix. The patient was admitted for conservative management and discharged three days later.

Conclusion

Epiploic appendagitis is a benign and self-limiting inflammation of the epiploic appendages and a rare cause of acute abdominal pain. It is imperative to be clinically and radiologically differentiated from appendicitis of which is a mimic. Correct diagnosis is crucial to avoid unnecessary surgical procedures.

(532) - PP-027

MIGRATED PANCREATICOJEJUNAL STENT FORMING A STENT–STONE COMPLEX CAUSING AFFERENT LOOP SYNDROME: A RARE CASE REPORT

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Introduction

Stents are commonly placed across pancreaticojejunal anastomoses following pancreaticoduodenectomy to support patency and prevent leakage. While stent occlusion, spontaneous migration, and defecation are known complications, the formation of a stent–stone complex in the jejunum is an extremely rare and delayed event. This can lead to various gastrointestinal manifestations, ranging from mild diffuse or localized intermittent abdominal pain to jejunal obstruction.

Purpose

To present a rare case of a migrated pancreaticojejunal stent that served as a nidus for enterolith formation in the jejunum, causing small bowel obstruction (bezoar ileus), and to highlight the diagnostic considerations associated with this uncommon complication.

Materials and Methods

A 69-year-old male with a history of pylorus-preserving pancreaticoduodenectomy (PPPD) for periampullary carcinoma presented fifteen years postoperatively with intermittent right upper quadrant pain and mild elevation of inflammatory markers. CT imaging revealed an intraluminal, non-enhancing mass- like structure containing central metallic material in the afferent loop, consistent with a migrated stent acting as a nidus for stone development. Diagnostic endoscopy and subsequent laparotomy were performed to confirm the diagnosis and manage the obstruction.

Results

Endoscopically, a stent–stone complex was identified, impacted within the pancreaticobiliary limb. The complex was surgically removed, and the postoperative course was uneventful.

Conclusion

Migrated pancreaticojejunal stents can serve as a nidus for enterolith formation. Afferent loop syndrome may present with nonspecific symptoms and laboratory findings, and should be considered in patients with unexplained abdominal complaints years after pancreatic surgery. This case underscores the importance of early recognition and management of stent migration before severe complications ensue.

(453) - PP-028

CT FINDINGS IN ACUTE COLONIC DIVERTICULITIS. A TWO-YEAR RETROSPECTIVE STUDY

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Introduction

Acute colonic diverticulitis is the most common complication of diverticular disease and represents an abdominal emergency. Computed tomography (CT) is the best imaging method for evaluating this condition.

Purpose

The purpose of our study is to analyze CT findings in patients diagnosed with acute colonic diverticulitis over a two-year period and correlate these findings with clinical outcomes, including complications.

Materials and Methods

A retrospective study was conducted on patients who were referred from the emergency department, and underwent CE-CT imaging for suspected acute colonic diverticulitis between September 2022 and September 2024. CT images were reviewed to identify characteristic findings and complications.

Results

The study included 147 patients, with the following CT findings: thickened and enlarged diverticula were observed in 95% of cases, pericolic fat stranding was present in 90% of cases which varies from minimal to severe inflammation, in some cases with presence of phlegmon, significant colonic wall focal thickening was noted in 85% of cases. Complications observed included: abscesses in 20% of cases, with varying sizes and locations, fistula formation in 10% of cases, typically involving colovesical or colovaginal fistulas, colonic perforation in 10% of cases, presenting as free air or fluid, bowel obstruction in 8% of cases, and obstructive ileus in one case. In this study 15% of the patients required surgical intervention due to severe complications, such as perforation, abscesses unresponsive to antibiotics and bowel obstruction.

Conclusion

CT imaging plays a crucial role in the diagnosis and management of acute colonic diverticulitis. The identification of specific CT findings, such as diverticula, fat stranding, and abscesses, as well as awareness of potential complications, aids in the accurate diagnosis and timely intervention, potentially reducing morbidity and improving patient outcomes.

(451) - PP-029

INCIDENTAL FINDING OF A GASTRIC DIVERTICULUM ON ABDOMINAL CT: A CASE REPORT

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Introduction

Gastric diverticula are rare, with an incidence of less than 0.1% on upper GI endoscopy and approximately 0.03% on autopsy. They are often asymptomatic and incidentally discovered on imaging, but may mimic other retroperitoneal or perigastric pathologies, including adrenal lesions or abscesses.

Purpose

To present a case of a gastric diverticulum incidentally detected on CT, describing its radiologic features and potential diagnostic pitfalls.

Materials and Methods

A 55-year-old male underwent contrast-enhanced abdominal CT for routine screening. A 3.5 cm cystic lesion with thin enhancing walls, fluid–fluid level, and a gas bubble was identified abutting the posterior gastric fundus. No surrounding fat stranding or wall thickening was observed. A water-soluble upper GI contrast study was performed to confirm the diagnosis.

Results

The contrast study demonstrated communication of the lesion with the gastric lumen, confirming a gastric diverticulum. The location and imaging features were typical: posterior wall of the gastric fundus, fluid–fluid level, and gas content. Differential diagnoses such as adrenal adenoma, gastric ulcer cavity, or pancreatic pseudocyst were excluded based on location, content, and lack of enhancement or inflammation.

Conclusion

Though rare, gastric diverticula should be considered in the differential diagnosis of left upper quadrant cystic lesions. Recognizing specific imaging characteristics—such as posterior fundal location, gas content, and fluid–fluid level—can help avoid misinterpretation and unnecessary interventions. For radiologists, awareness of these findings is crucial in distinguishing them from clinically significant masses, particularly in asymptomatic patients.

(460) - PP-030

DIAGNOSTIC APPLICATIONS OF SPLEEN ULTRASOUND ELASTOGRAPHY: A STUDY OF HEALTHY INDIVIDUALS AND PATIENTS WITH HEPATIC AND SPLENIC PATHOLOGIES"

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Introduction

Spleen elastography is an emerging, non-invasive imaging technique that enables assessment of tissue stiffness. Its clinical relevance is increasing due to its potential to reflect systemic and hepatic pathologies, particularly liver fibrosis and portal hypertension.

Purpose

This study aims to present recent advancements in spleen ultrasound elastography, establish reference elasticity values in healthy individuals, and explore its diagnostic utility across various clinical contexts, especially liver-related diseases.

Materials and Methods

Between 2021 and 2025, spleen examinations using shear wave elastography (SWE) were performed in our department. The study included 234 healthy volunteers (112 men, 122 women) to determine normative values. Additionally, 72 patients with liver fibrosis, portal hypertension, esophageal varices, myelofibrosis, lymphoproliferative disorders, or splenic infections were assessed. Quantitative measurements of spleen elasticity were analyzed and compared across clinical groups.

Results

Spleen stiffness showed significant correlation with the degree of liver fibrosis based on the METAVIR scoring system and was elevated even in some cases where liver stiffness remained within upper normal limits. Increased stiffness was observed in patients with hepatitis B and C, portal hypertension, and esophageal varices. In patients with primary biliary cholangitis, elevated spleen stiffness often indicates the presence of portal hypertension and potential complications. While not specific for lymphoma, stiffness measurements provided helpful differentiation between normal parenchyma and malignant splenic lesions. In myelofibrosis, spleen stiffness correlated with treatment response. Distinct stiffness values were also observed in cases of splenic infection.

Conclusion

Spleen ultrasound elastography demonstrates strong potential as an adjunctive diagnostic tool in hepatology and hematology. It offers valuable insights into disease progression and treatment response. While its applications in liver fibrosis and portal hypertension are well-documented, further studies are needed to validate its role in other hematologic and splenic conditions.

(448) - PP-031

LEFT RENAL VEIN THROMBOSIS IN A PATIENT WITH RETRO-AORTIC RENAL VEIN: A CASE REPORT

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Introduction

Renal vein thrombosis is a rare vascular condition that may present with nonspecific clinical symptoms, often mimicking more common pathologies. A retroaortic left renal vein is a known anatomical variant that can predispose to thrombosis due to altered hemodynamics. Timely imaging diagnosis is crucial to guide appropriate anticoagulation and prevent potential complications.

Purpose

To present a case of left renal vein thrombosis in a young female patient with a retroaortic left renal vein, highlighting the diagnostic value of imaging and the subsequent clinical management.

Materials and Methods

A 38-year-old woman presented to the emergency department with acute left flank pain, clinically suggestive of renal colic. She had no significant medical history other than oral contraceptive use. Laboratory testing was unremarkable. Renal ultrasound revealed dilation and echogenic intraluminal material within the left renal vein. Subsequent contrast-enhanced CT confirmed thrombosis of the left renal vein, absence of contrast enhancement in the left renal parenchyma and the presence of a retroaortic left renal vein.

Results

The patient was managed conservatively with anticoagulation therapy. Her clinical condition gradually improved, with resolution of symptoms and no evidence of thrombus extension or migration.

Conclusion

Left renal vein thrombosis is a rare and often under-recognized condition that can mimic other abdominal pathologies. A retroaortic renal vein (nutcracker variant) constitutes a predisposing factor due to venous compression. Early imaging diagnosis is crucial for the timely initiation of anticoagulation therapy and the prevention of potential complications, such as thrombus extension into the inferior vena cava or pulmonary arteries.

(447) - PP-032

INCIDENTAL DIAGNOSIS OF INFLAMED SMALL BOWEL DIVERTICULA IN A PATIENT HOSPITALIZED FOR BACTERIAL MENINGITIS: A CASE REPORT

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Introduction

Small bowel diverticulosis is a rare condition, often asymptomatic and incidentally discovered. However, diverticulitis or perforation of small bowel diverticula may lead to significant morbidity. Recognition of these entities is challenging, especially when the clinical presentation is dominated by unrelated systemic infection.

Purpose

To present a case of incidentally detected jejunal diverticulitis with suspected perforation on CT, in a patient hospitalized for bacterial meningitis.

Materials and Methods

A 73-year-old male was hospitalized with bacterial meningitis. Despite appropriate antimicrobial treatment, he showed persistently elevated inflammatory markers (notably CRP), while cerebrospinal fluid analysis revealed no pleocytosis. To investigate a possible alternative septic focus, a contrast-enhanced abdominal CT was performed. Imaging demonstrated multiple jejunal diverticula, the largest measuring 2.2 cm, with associated mural thickening, fat stranding, and small foci of extraluminal air—suggestive of diverticulitis with possible contained perforation.

Results

There were no abscesses or distant septic emboli. The findings were consistent with jejunal diverticulitis complicated by localized perforation. The patient received a change in antibiotic regimen, with targeted coverage, and was managed conservatively. Subsequently, clinical condition and inflammatory markers gradually improved.

Conclusion

Small bowel diverticulitis, though uncommon, must be considered in patients with unexplained systemic inflammation, particularly during hospitalization for unrelated primary infections. CT imaging plays a vital role in identifying clinically silent intra-abdominal infections, enabling appropriate management and preventing progression to more severe complications.

(308) - PP-033

B-CELL LYMPHOMA IN A PATIENT WITH SIMULTANEOUS PANCREAS-KIDNEY TRANSPLANTATION: RADIOLOGIC FOLLOW-UP AND CLINICAL COURSE

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Introduction

Lymphoma is a malignant disease of lymphocytes that typically begins in lymph nodes and may subsequently spread to the liver, spleen, bone marrow, and other organs. Its etiology is not fully understood; however, it is known to occur more frequently in immunocompromised individuals, particularly in patients receiving immunosuppressive therapy. The disease is usually diagnosed by CT imaging following the onset of systemic symptoms such as fever, night sweats, and fatigue.

Purpose

To present potential complications occurring over a ten-year period following simultaneous pancreas-kidney transplantation.

Materials and Methods

We present the case of a female patient who underwent simultaneous pancreas-kidney transplantation in 2014 (USA) due to diabetic nephropathy secondary to type 1 diabetes mellitus (diagnosed at age 6). In September 2023, the patient presented with high-grade fever (40°C), night sweats, and fatigue. Abdominal and pelvic CT revealed three hypodense tumor lesions in the transplanted kidney, one in the pancreatic head, and several in the native kidneys, with additional osseous metastases. Diagnosis was confirmed by histopathological analysis of a biopsy specimen, identifying diffuse large B-cell lymphoma as part of post-transplant lymphoproliferative disorder (PTLD). The patient was started on R-CHOP immunochemotherapy and closely monitored.

Results

In February 2024, the patient developed bowel obstruction due to perforation of a jejunal loop, requiring emergency surgical intervention with ileostomy formation. On March 20th, the patient was re-hospitalized for recurrent fever and fatigue. Follow-up CT on March 26th demonstrated organized postoperative fluid collection and non-occlusive thrombosis of the renal vein in the transplanted kidney. Previously identified tumor lesions in the kidneys and pancreas showed significant post-treatment regression, indicating a favorable response to therapy

Conclusion

Appropriate radiological surveillance in transplant recipients significantly enhances the early detection of postoperative complications and immunosuppression-related pathologies, thereby improving therapeutic outcomal.es and patient survive.

(537) - PP-034

ADULT INTUSSUSCEPTION ASSOCIATED WITH A LEAD POINT. A RARE MANIFESTATION OF SMALL BOWEL TUMORS- REPORT OF EIGHT CASES OVER A 5-YEAR PERIOD.

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Introduction

Adult intussusception is a rare clinical entity, accounting for only 1–5% of all intestinal obstructions and less than 5% of all intussusception cases. Tumor-related small bowel intussusception accounts for 30– 50% of cases and may be transient, recurrent, or persistent. Its presentation is nonspecific, with symptoms such as chronic or intermittent abdominal pain, bloating and nausea, making early diagnosis challenging. Cross-sectional imaging, particularly computed tomography (CT) is essential to identify clinically significant cases and guide appropriate management.

Purpose

To describe the computed tomography (CT) features of adult intussusception cases with surgically proven tumors as lead points, and to highlight key imaging findings that help differentiate clinically significant cases.

Materials and Methods

We retrospectively reviewed abdominal CT scans of adult patients diagnosed with intussusception at our radiology department during the last 5 years. Inclusion criteria were age > 18 years old, CT evidence of intussusception with a lead point, and histologically proven tumor. CT scans were analyzed to identify characteristic imaging features.

Results

A total of 8 patients with small bowel tumors as lead points for intussusception were identified. There were 7 males and 1 female. Abdominal pain was the most common presenting symptom (70%). In 6 patients intussusception was enteroenteric and in 2 patients was ileocolic. All patients underwent surgical resection, and histopathological examination confirmed adenocarcinoma (n=2, one of unknown primary site), lipomas (n=2), lymphoma (n=1), neuroendocrine tumor (n=1), metastatic melanoma (n=1), inflammatory fibroid polyp (n=1).

Conclusion

CT imaging is essential for identifying adult lead point intussusception. Recognizing characteristic imaging patterns can help differentiate clinically significant from incidental intussusceptions. Early imaging suspicion can lead to timely surgical management.

(401) - PP-035

RADIOLOGIC FEATURES OF LIVER CIRRHOSIS AND ITS COMPLICATIONS ON CT AND ULTRASOUND

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Introduction

Liver cirrhosis is a chronic diffuse liver disease and a common endpoint for many chronic hepatic conditions that lead to progressive destruction of the liver parenchyma. It is characterized pathologically by distortion of hepatic architecture through extensive fibrosis and formation of regenerative nodules. Clinically, most patients with cirrhosis remain asymptomatic or report only mild symptoms until the disease reaches a point of decompensation, defined as the first occurrence of one or more complications such as jaundice, ascites, variceal bleeding, hepatorenal syndrome, or hepatic encephalopathy. Ultrasound and CT can reveal findings that indicate cirrhosis, both in early and advanced stages of the disease.

Purpose

To highlight imaging features associated with liver cirrhosis and its complications on ultrasound and CT.

Materials and Methods

A focused literature review was performed to identify imaging findings of cirrhosis and its complications. Characteristic images from patients at our institution were collected to illustrate these findings.

Results

Imaging findings of liver cirrhosis on CT and ultrasound include, among others, heterogeneous parenchymal attenuation or echogenicity, regenerative or dysplastic nodules and hepatocellular carcinoma, atrophy of the right lobe and hypertrophy of left and caudate lobes or atrophy of the whole liver in advanced disease. Imaging features of portal hypertension on CT and gray-scale ultrasound include enlargement of the portal vein and its branches, dilation of the splenic and mesenteric veins, and the presence of portosystemic collateral vessels, as well as splenomegaly due to splenic congestion. Doppler ultrasonography can detect pathological waveforms and retrograde flow in the portal vein in the presence of portal hypertension. Ascites can be assessed with both modalities.

Conclusion

Cirrhosis and its complications produce a variety of imaging findings on CT and ultrasound. Although these modalities are not the gold standard for the diagnosis and evaluation of cirrhosis, both can aid the differential diagnosis by revealing indicative cirrhotic and complication-related changes.

(314) - PP-036

CHRONIC DIVERTICULITIS AND ITS COMPLICATIONS: SPECTRUM OF CLINICAL, IMAGING AND PATHOLOGIC FINDINGS OF A NOT-WELL-KNOWN DISEASE

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Introduction

Diverticular disease of the colon is a common condition, often complicated by inflammation. Most patients present with acute diverticulitis, characterized by acute left lower quadrant pain and fever. Nevertheless, some patients develop a chronic form of diverticulitis, often presenting with obstructive symptoms, chronic abdominal pain, and a history of recurrent inflammatory episodes. This underdiagnosed variant poses a diagnostic challenge for radiologists and treating physicians, and only a few cases are detailed in the literature.

Purpose

To investigate the chronic form of diverticulitis and its possible complications; to correlate imaging and pathologic findings; and to highlight characteristic clinical and imaging features in order to raise awareness of this underrecognized condition.

Materials and Methods

Two illustrative cases were selected for their characteristic clinical, imaging, and surgical pathologic findings. Both patients underwent contrast-enhanced multidetector CT (MDCT) (pre-contrast, arterial, and portal venous phases); one also underwent abdominal MRI. Imaging findings were correlated with surgical and histologic findings. Additionally, a focused literature review was performed to investigate previously reported imaging and histopathologic features of chronic diverticulitis.

Results

Patients with chronic diverticulitis may present with obstructive symptoms, with signs of adjacent organ obliteration due to fibrosis or evidence of fistula formation. Imaging findings include diverticula, mild circumferential colonic wall thickening with luminal narrowing, retrograde dilation and obstruction, fistulous tracts, chronic loculated collections, and hydronephrosis due to ureteral encasement. Histology confirmed diverticulosis with pronounced fibrosis in the bowel wall and pericolic fat. The literature contains few reports of the chronic form of diverticulitis, and only a handful of surgically proven cases; mural and pericolic fibrosis is a consistent finding.

Conclusion

Chronic diverticulitis remains a challenging diagnosis. Imaging with MDCT and MRI may accurately identify evidence of the disease and aid in the appropriate management of these patients. Mural and pericolic fibrosis appears to be the defining feature of the chronic form.

(437) - PP-037
ADULT CHOLEDOCHAL CYST AS AN INCIDENTAL FINDING

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Introduction
Choledochal cysts represent a disproportional dilatation of any part of the bile ducts, most often the common bile duct. The theory of their origin is that they arise as a result of an anomalous pancreatic-biliary junction. The diagnosis is made when dilatation of part of the bile ducts is determined, which is not caused by a tumor, cholelithiasis or inflammatory process. Although the diagnosis is usually made in childhood, in approximately 25% of cases, diaganosis is established in adulthood.

Purpose
Analysis of imaging findings in a patient with adult choledochal cyst - case report

Materials and Methods
Due to occasionally present pain in the epigastrium, a 57 years old female patient underwent an ultrasound examination, where dilatation of common bile duct was observed. A CT examination was performed where a dilation of the common bile duct with a width of up to 38mm was observed, with dilatation of proximal bile ducts. There were chronic changes of gallbladder with irregular wall thickening and enhancing. MRCP was performed where a fusiform dilatation of common bile duct was determined with higher pancreaticobile duct junction. ERCP confirmed the diagnosis.

Results
Common bile duct dilatation with dilatation of common hepatic duct and intrahepatic ducts in support of Choledochal Cyst Type IVa according to the Todani classification and with a higher f pancreaticobile duct junction-type IIb according to the Komi classification. Gallbladder irregular wall thickening with enhancing raise a suspicion of the development of gallbladder cancer.

Conclusion
Despite the classical radiological presentation, malformations of the biliary tract represent a diagnostic challenge, particularly those discovered in adulthood. The role of the radiologist is to eliminate other causes of bile duct dilatation, and to make a definitive diagnosis of malformation, whose very presence gives the possibility of developing complications and even malignant transformation, in order to timely intervene therapeutically.

(320) - PP-038

LEFT TURN AHEAD: AN ATYPICAL COURSE OF THE INFERIOR VENA CAVA

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Introduction

A left-sided inferior vena cava is the second most common anomaly of the IVC, occurring in approximately 3% of the population. In this variant, the IVC drains into the left renal vein, which crosses anterior to the aorta and joins the suprarenal IVC on the right. These anomalies are often discovered unintentionally during imaging studies and can be accompanied by other variations in adjacent venous systems, such as renal, suprarenal, and gonadal veins. Understanding these anomalies is crucial in avoiding misinterpretation of imaging findings and in planning safe and effective surgical or interventional procedures.

Purpose

This report aims to present a rare vascular anomaly—a left-sided inferior vena cava (IVC)—identified incidentally during imaging, and to discuss its anatomical features, clinical relevance, and implications for radiological and surgical procedures.

Materials and Methods

A 57-year-old female patient, with no history of vascular interventions or congenital disorders, underwent an abdominal computed tomography (CT) scan for unrelated clinical evaluation. The imaging study was reviewed by the radiology team at 251 Airforce & Veterans Hospital.

Results

CT imaging revealed an unusual anatomical finding: a left-sided IVC draining into the left renal vein. The left renal vein then crossed anterior to the aorta at the L1 vertebral level and joined a normally positioned prehepatic segment of the IVC on the right side. No additional structural or vascular abnormalities were identified in the abdomen.

Conclusion

Left-sided IVC is a rare but clinically relevant anatomical variant. Although it generally presents without symptoms, its recognition is important in the context of radiologic interpretation and procedural planning. Failure to identify such anomalies may result in misdiagnosis or complications during surgery or vascular intervention. Awareness of these variations should be maintained, particularly among radiologists, interventional radiologists, and vascular surgeons.

(413) - PP-039
AN ENDEMIC CAUSE MIMICKING A MASS: HYDATID CYST

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Introduction
The liver is a common site for both primary and secondary cystic lesions, which can present with non-specific symptoms. While hepatic cystic tumors, including biliary cystadenomas and cystadenocarcinomas, are part of the differential diagnosis, infectious causes such as hydatid cysts should also be considered, particularly in endemic regions. Differentiating between these entities is crucial, as misdiagnosis can lead to unnecessary surgical or oncologic interventions. Imaging modalities, including ultrasound, MRI, and MRCP, play a key role in distinguishing these lesions.

Purpose
This case highlights a hepatic hydatid cyst mimicking a cystic liver tumor, emphasizing the importance of considering hydatid disease in the differential diagnosis of hepatic cystic lesions. Proper recognition of imaging features can prevent misdiagnosis, ensuring appropriate management and avoiding unnecessary oncologic treatments.

Materials and Methods
A 64-year-old female presented to the internal medicine clinic with right upper quadrant pain. Blood tests revealed elevated liver function tests. A hepatobiliary ultrasound revealed normal findings. However, as clinical suspicion remained high, a Magnetic Resonance Cholangiopancreatography was requested. The MRI protocol included T1-weighted, T2-weighted, dynamic contrast-enhanced, and diffusion-weighted sequences.

Results
Imaging revealed cystic lesions in the dome of liver segments 6 and 7, compressing the adjacent liver parenchyma. These lesions appeared hypointense on T1-weighted images and heterogeneously hyperintense on T2-weighted images(Figure 1c). They demonstrated no contrast enhancement on dynamic sequences and showed components with diffusion restriction(Figure 2). Given that the patient resided in an endemic area, further laboratory tests were conducted, which confirmed the diagnosis of hydatid cyst.

Conclusion
Hepatic hydatid cysts can closely mimic cystic liver tumors, especially in patients presenting with non-specific symptoms. In endemic regions, the presence of non-enhancing cystic lesions with diffusion-restricting components on MRI should raise suspicion for hydatid disease. Accurate differentiation between infectious and neoplastic cystic lesions is essential for appropriate treatment planning, preventing unnecessary interventions, and improving patient outcomes.

(471) - PP-040

TIME-DEPENDENT ULTRASOUND ASSESSMENT OF BILIARY DUCT DILATATION IN CONFIRMED CHOLEDOCHOLITHIASIS: A THREE-POINT OBSERVATIONAL STUDY

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Introduction

Ultrasound remains a widely accessible modality for the evaluation of biliary obstruction. Understanding the evolution of biliary dilatation over time may improve diagnostic accuracy and define the timing for intervention.

Purpose

To assess the temporal changes of common bile duct (CBD) diameter and intrahepatic ducts (IHD) dilatation in patients with choledocholithiasis, and to evaluate correlations with serum bilirubin levels.

Materials and Methods

We included 41 patients with clinically suspected acute biliary obstruction and confirmed choledocholithiasis on ERCP and/or MRCP. Patients with cholecystectomy or chronic biliary obstruction were excluded. Primary ultrasound parameters assessed were CBD diameter, with dilation defined as $\geq$6 mm, and IHD dilation, evaluated qualitatively. Ultrasound data were collected at three time-points: within 24 hours of symptom onset (t1), at 24-48 hours (t2), and at 48-72 hours (t3). Statistical analysis was performed with Pearson correlation coefficients r, two-tailed p-values, and sample covariances for all pairwise combinations. P<.01 declared significance.

Results

At t1, 14 patients (34.1%) had a dilated CBD which increased to 30 patients (73.2%) at t2, and 40 patients (97.6%) at t3. IHD dilatation increased from 2.4% at t1, to 22.0% at t2, and 82.9% at t3. Dilated CBD was significantly associated with IHD dilatation at t1 (r=.43, p=.0049) and t2 (r=.47, p =.0018). A moderate-strong correlation was found between CBD diameter and total/direct bilirubin levels at all time-points. CBD at 48h had the strongest correlation with total (r=.76, p<.001) and direct bilirubin (r=.74, p<.001). Similar patterns were observed for IHD dilatation, particularly at t2.

Conclusion

CBD dilatation may not be evident early in the course of choledocholithiasis but it almost invariably appears at 48-72 hours. IHD dilatation tends to develop later. Increasing bilirubin levels parallel the progression of biliary dilatation. These findings highlight the value of serial ultrasound examinations in the dynamic assessment of biliary obstruction.

(404) - PP-041

PHANTOM STUDY OF THE EFFECT ON IMAGE QUALITY OF COMBINED USE OF COMPRESSED SENSE AND HALF SCAN (OUTER LOOP) IN FAT-SUPPRESSED 3D T1 FFE IN BREATH-HOLD

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Introduction

Fat-suppressed 3D T1-FFE (eTHRIVE) is mainly performed in the abdominal region while holding your breath. Reducing scan time of breath hold is very important to reduce the burden on the patient and motion artifacts. Previously, parallel imaging and half scan were combined to reduce the scan time of eTHRIVE. In recent years, the use of parallel imaging combined with compressed sensing (Compressed SENSE) has made it possible to reduce scan time with less degradation of image quality. There has been little basic research on the image quality of combined use of Compressed SENSE and half scan (outer loop) in eTHRIVE.

Purpose

The purpose of this study is to conduct a basic study on the effect of combined use of Compressed SENSE (CS) and half scan (outer loop) on image quality in eTHRIVE of the abdominal region.

Materials and Methods

The equipment used was Philips Ingenia 1.5T R5. The imaging conditions were eTHRIVE (TR: 3.1ms , TE: 1.47ms , Flip Angle: 10 , slice thickness 4 mm, and the CS factor 1-5 was changed by 1 step and the outer loop was changed by 0.1 steps up to 0.6-1). The phantom was the Nikko Fines 90-401 phantom, and the contrast ratio (CR: Contrast Ratio), PSNR (Peak signal to noise ratio), SSIM (Structure similarity index measure), and profile curve were compared using contrast, uniformity, and pin pattern sections.

Results

There was no significant change in CR when the CS factor and half scan factor were changed. For the same scan time, CS alone had higher SSIM and PSNR values than the combination of CS and half scan.

Conclusion

Phantom experiments suggest that in the abdominal region, eTHRIVE of breath-hold does not degrade image quality when CS alone is used to shorten scan time, rather than combining CS with a half scan.

(491) - PP-042

EVALUATION OF CAROLI DISEASE WITH MRCP AT CYSTIC LIVER LESIONS PATIENTS.

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Introduction

A review of patients with known cystic lesions in liver parenchyma performing MRCP for uncorrelated clinical query reveals cystic dilation of bile ducts, setting Caroli disease as new or coexist diagnosis. Caroli disease is a congenital disorder with multifocal cystic dilation of segmental intrahepatic bile ducts.

Purpose

This study assesses the role of MRCP at Caroli disease diagnosis despite the existence of liver cysts.

Materials and Methods

We reviewed 7(seven) cases that had undergone abdominal ultrasound, MRI of upper abdomen and MRCP at which cysts and aneurysmal bile dilations had been mentioned at their diagnostic report.

Results

Our analysis shows a strong correlation between liver, renal cysts and Caroli disease. 4(four) patients out of 7(seven) had the three of them.

Conclusion

MRCP helps distinguish Caroli disease as differential diagnosis of liver cysts. Do not underestimate their coexistence especially if renal cysts are also present.

(420) - PP-043

SMALL BOWEL DIVERTICULITIS: IMAGING APPROACH AND DIAGNOSTIC VALUE OF RADIOLOGY

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Introduction

A 70-year-old male patient presented to the Emergency Department with intense abdominal pain, primarily localized in the right hemiabdomen. He reported vague digestive symptoms, and upon admission, he had a fever and elevated inflammatory markers, raising suspicion for an intra-abdominal inflammatory process.

Purpose

This case aims to review the diagnostic imaging findings of small bowel duodenal diverticulitis, highlighting the importance of accurate and timely diagnosis for appropriate management and prognosis.

Materials and Methods

The diagnosis of small bowel diverticulitis can be challenging due to its rarity and non-specific clinical presentation. Initial abdominal radiography showed no evidence of small bowel obstruction, air-fluid levels, or free intraperitoneal air. Given the patient's persistent symptoms, a contrast-enhanced CT scan of the abdomen with oral and intravenous contrast, along with multiplanar reconstructions, was performed. This imaging technique is considered the gold standard due to its high sensitivity and specificity. CT findings revealed multiple large inflammatory duodenal diverticula located on the mesenteric border, containing both contrast and air. Additionally, there was bowel wall thickening adjacent to the inflamed diverticula, reactive lymphadenopathy, and surrounding inflammatory changes. Dilated small bowel loops with fat stranding were noted, without any significant free fluid in the peritoneal cavity. Incidentally, uncomplicated colonic diverticulosis was also identified.

Results

The imaging findings are indicative of acute, uncomplicated small bowel diverticulitis. Although rarer than colonic diverticulosis (0.5-2.3%), the duodenum remains the most frequent site for small bowel diverticula (10%). These diverticula are acquired, extraluminal, and lack a muscular layer, making complications less common.

Conclusion

CT imaging plays a vital role in evaluating the severity and extent of small bowel diverticulitis, guiding management strategies, and excluding differential diagnoses. Recognizing its imaging features is essential for radiologists, particularly in emergency settings, to prevent diagnostic delays.

(554) - PP-044

ADRENAL ADENOMAS – IMAGING FINDINGS, DEMOGRAPHICS AND ASSOCIATIONS – A SINGLE CENTER STUDY

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Introduction

Adrenal adenomas are a common incidental finding during imaging for other indications, notably in oncologic patients. Most adenomas exhibit typical imaging features, while a proportion of them require additional post-contrast phases or histology to be distinguished from metastases. Apart from oncologic patients, adenomas are a growing area of focus due to their possible role in metabolic syndrome, and their demographics and associations are also of interest.

Purpose

To determine the incidence, imaging features, demographics, and comorbidities in a retrospective series of patients with adrenal adenomas, imaged with computed tomography (CT).

Materials and Methods

We conducted a retrospective study of 6290 patients who underwent a CT scan over a 4-year period for varying indications. Patients with adrenal adenomas were further assessed for lesion imaging features (homogeneity, size, mean density, and laterality), demographics (age and sex), and comorbidities (malignancy, hypertension, and diabetes).

Results

142 patients were found to have adrenal adenomas (2,27%). There was a slight female predominance (60%), and a trend of increasing incidence with age, reaching a peak during the 7th and 8th decades. Seventy-one percent of lesions showed typical imaging features, while 10% had high density, and a further 19% showed atypical features. There was no significant difference in the size of the three types of adenomas. Lesions were more commonly left-sided (52%), followed by right-sided (29%) and bilateral (19%). 41% of patients with adenomas had hypertension, diabetes, or both, compared to 55% of patients in the control group. Of the adenoma patients who underwent hormonal assessment, hormone production was more often observed in atypical and high-density lesions, compared to typical adenomas.

Conclusion

We report the incidence, imaging features, demographics, and comorbidities in a series of patients with adrenal adenomas.

(342) - PP-045

ROLE OF CT ANGIOGRAPHY IN THE EVALUATION OF LIVER INVOLVEMENT IN RENDU-OSLER-WEBER SYNDROME

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Introduction

Hereditary Hemorrhagic Telangiectasia (HHT), or Rendu-Osler-Weber syndrome, is a rare autosomal dominant inherited vascular disorder characterized by mucocutaneous telangiectases and visceral arteriovenous malformations (AVMs). The most common areas affected are the nose, face, fingers, tongue and lungs, whereas liver involvement may present diagnostic challenges due to variable imaging findings.

Purpose

To highlight the role of multidetector computed tomography (MDCT) and CT angiography (CTA) in the evaluation of hepatic vascular abnormalities in a patient with HHT presenting with atypical abdominal symptoms.

Materials and Methods

A 78-year-old male with known HHT and a history of chronic epistaxis and anemia was admitted with symptoms suggesting acute pancreatitis. Clinical examination and endoscopy revealed multiple mucocutaneous and gastrointestinal telangiectases. MDCT and CTA were performed to assess liver involvement.

Results

Enhanced CT in the arterial phase demonstrated numerous small intraparenchymal telangiectases and large confluent vascular masses (LCVMs). CTA revealed extensive arteriovenous abnormalities, including arterioportal shunts and telangiectases, confirming the presence of intrahepatic shunting. Three types of hepatic shunts—arteriosystemic, portosystemic, and arterioportal—were considered. These findings are consistent with hepatic involvement in HHT and explained the perfusion abnormalities observed.

Conclusion

CTA is a valuable non-invasive imaging modality in detecting and characterizing hepatic vascular anomalies in HHT. Recognition of typical imaging patterns, including telangiectases, vascular masses, and shunts, is crucial for accurate diagnosis and management. This case underlines the importance of cross-sectional imaging in evaluating visceral involvement in HHT, especially when clinical presentation is non-specific.

ARTIFICIAL INTELLIGENCE IN RADIOLOGY

(270) - PP-046

FUTURE FORESIGHT OF MEDICAL IMAGING IN THE ERA OF ARTIFICIAL INTELLIGENCE

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Introduction

Integrating artificial intelligence (AI) into medical imaging (MI) rapidly transforms the field, enhancing diagnostic accuracy, workflow efficiency, and patient care. AI, particularly machine learning and deep learning is expected to redefine MI practice, improving both clinical outcomes and operational processes.

Purpose

This paper explores the future foresight of MI in the AI era, focusing on how these technologies will influence diagnostic practices, radiologist roles, and healthcare delivery.

Materials and Methods

This review synthesizes current research on AI applications in MI, emphasizing AI-driven image interpretation, decision support, and predictive analytics. Studies, clinical trials, and expert opinions were analyzed to forecast AI's impact on MI, including its role in imaging modalities, realtime diagnostics, and clinical decision-making. Ethical and operational challenges related to AI adoption were also considered.

Results

AI is expected to enhance diagnostic accuracy by reducing human error and enabling earlier detection of diseases. Machine learning will automate tasks like image segmentation and report generation, improving workflow efficiency. Predictive analytics will facilitate personalized treatment plans and better patient outcomes. The role of radiologists will evolve toward a collaborative model, with AI serving as a tool to support, not replace, human expertise. However, challenges such as data privacy, algorithm transparency, and ongoing training must be addressed.

Conclusion

AI will significantly transform MI, improving diagnostic capabilities and patient care. Successful integration will require clear ethical guidelines, regulatory frameworks, and continuous education. The future of MI will be defined by a partnership between radiologists and AI, where technology augments human expertise in clinical decision-making.

(257) - PP-047

ASSESSING THE REPEATABILITY OF MRI RADIOMIC FEATURES DERIVED FROM AI-BASED DIFFUSION SEQUENCES IN HEALTHY LIVER PARENCHYMA

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Introduction

Radiomics represent a highly increasing field in the analysis of medical images. DW-MRI is an MRI technique that has already proved its feasibility and efficiency when combined with radiomics. However, the repeatability of radiomic features has been recognized as an important challenge associated with this method. Radiomic features can be affected by image parameters, resolution, image post-processing techniques, and software employed for extraction. Previous studies have reported mixed outcomes on the repeatability of radiomics; however, the repeatability of radiomic features in healthy liver parenchyma with AI-powered DW-MRI is not well-established yet.

Purpose

This study aims to investigate the repeatability of radiomic features derived from AI-based DW-MRI in the liver of healthy participants.

Materials and Methods

All measurements were performed on a Siemens Altea 1.5T MR scanner, equipped with an AI-based image reconstruction technique. In total, 20 participants underwent a routine liver protocol. The DWI sequence was acquired at the beginning of the protocol, and it was repeated once again at the end. MedSeg was used to build a semi-automatic VOI around the liver. The PyRadiomics software was used to extract 200 radiomic features and their corresponding liver segmentation masks. Shape, first-order, GLCM, GGLRLM, GLSZM, NGTDM, and GLDM features were extracted. The features that were analyzed included metrics related ADC maps. Re-segmentation using an intensity outlier filtering was also applied.

Results

This study found important variations in the repeatability of radiomic features derived from DW-MRI in healthy liver parenchyma. Out of 200 radiomic features, n=19 related to diffusion metrics, such as ADC, demonstrated high repeatability (ICCs>0.75). Variability in ROI placement and differences in scan parameters contributed to the observed inconsistencies, highlighting the need for standardized protocols.

Conclusion

Radiomic features derived from DW-MRI of healthy liver parenchyma exhibited good repeatability, particularly for DW-related metrics. However, variability in certain features underscores the importance of standardizing imaging and analysis techniques.

(501) - PP-048

AN INTERPRETABLE FUZZY COGNITIVE MAP MODEL OPTIMIZED VIA PARTICLE SWARM FOR PARATHYROID LESION CLASSIFICATION

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Introduction

Parathyroid lesions are evaluated preoperatively using multimodal imaging and clinical scoring systems, but diagnostic variability can reduce reliability. Traditional machine learning (ML) models often achieve high accuracy but lack causal interpretability, limiting clinical utility. In contrast, Fuzzy Cognitive Maps (FCMs) offer a more transparent, interpretable approach. This study employs an FCM enhanced with Particle Swarm Optimization (PSO) to classify parathyroid lesion status based on expert clinical criteria.

Purpose

We propose an interpretable FCM-PSO framework for parathyroid lesion classification, aiming to align algorithmic inference with expert clinical reasoning. Diagnostic cases are represented as structured causal networks based on clinician-derived scores. The model captures the strength and direction of influence between features, refined using a population-based optimization technique. This design promotes explainable outputs by quantifying how each input affects the final decision, supporting evidence-based endocrine diagnostics.

Materials and Methods

A dataset of 119 diagnostic cases, annotated by clinical experts, was used to develop and evaluate the model. The FCM included three input concepts—the maximum diameter of the dominant lesion, total number of lesions, and the Wisconsin Index—and one output concept indicating lesion classification. Initial concept weights were randomly assigned within the interval [-1, 1] and optimized via the PSO algorithm. To mitigate class imbalance, the Synthetic Minority Over-sampling Technique (SMOTE) was applied. A 10-fold cross-validation protocol was employed to assess model robustness and generalization.

Results

The FCM-PSO model achieved a mean classification accuracy of 90.63%±6.51%, with an average loss of 0.09±0.06, sensitivity of 87.31% ± 7.08%, specificity of 87.36% ± 10.73%, and precision of 86.83% ± 13.62%, across all folds.

Conclusion

The FCM-PSO demonstrated robust performance in classifying parathyroid lesions based on expert-derived clinical scores. Future studies could expand the model with advanced FCM-based explainable methodologies along with additional clinical and image-related features.

(421) - PP-049
AI IN CHEST IMAGING: ASSESSING THE DIAGNOSTIC VALUE OF AN AI TOOL

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Introduction
Artificial intelligence (AI) continues to gain traction in radiology, particularly in chest imaging.

Purpose
This study evaluates Rayscape CXR, an AI tool for interpreting chest X-rays, by comparing its diagnoses with radiologists' reports and assesses its potential role as a supportive tool in clinical practice.

Materials and Methods
We retrospectively selected digitally generated chest X-rays from 201 patients that came to the emergency department of our institution. Diagnoses were compared between radiologists and Rayscape CXR across 17 predefined categories supported by the AI. Additional findings, noted by radiologists but missed by the AI, were also recorded. Based on confusion matrix analysis, balanced accuracy (BA), F1 score, as well as sensitivity and specificity, were calculated for each category.

Results
The AI demonstrated high performance in several areas, including fracture (BA = 92.86%, F1 = 0.92), support devices (BA = 99.73%, F1 = 0.96), and edema (BA = 99.75%, F1 = 0.86). Moderate performance was observed for conditions such as atelectasis (BA = 77.52%, F1 = 0.67), hilar/mediastinal disease (BA = 75.41%, F1 = 0.63), and lung lesions (BA = 83.17%, F1 = 0.56). The system's sensitivity for each pathology ranged from 40% (e.g. emphysema) to 100% (e.g. support devices), while specificity ranged from 88.2% (e.g. diaphragmatic dysfunction) to 100% (e.g. pneumothorax).

Conclusion
Despite the limited sample size, our findings suggest that Rayscape CXR demonstrates strong accuracy in detecting several specific pathologies, although it shows limitations in identifying conditions outside its predefined categories, such as pneumoperitoneum, which are clinically significant. Additionally, it doesn't account for patient-related or technical imaging variables, often leading to diagnostic errors. Thus, while AI tools like this can enhance efficiency and consistency, their outputs must be interpreted within a broader clinical context by radiologists. To ensure safe and effective integration into routine practice, further validation on larger, more diverse datasets is essential.

(484) - PP-050

VALIDATION OF MINDGLIDE FOR MULTIPLE SCLEROSIS LESION SEGMENTATION IN MR BRAIN SCANS. A FEASIBILITY STUDY.

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Introduction

Multiple Sclerosis (MS) is a chronic disease affecting millions of individuals worldwide. To monitor disease progression, Magnetic Resonance Imaging (MRI) scans are assessed by clinicians, capturing information for inflammation caused by MS lesions. Recent advances in Artificial Intelligence have enabled the development of automated and robust tools (i.e., trained on largely heterogeneous datasets) offering advanced quantification.

Purpose

This study aims to validate MindGlide model developed for MR brain scans segmentation in Multiple Sclerosis patients.

Materials and Methods

The model's segmentation capability was quantified using Dice Similarity Coefficient (DSC) and Normalized Surface Distance (NSD) across three open-access clinical datasets (N=250 scans), at a cross-sectional level. The MR brain scans consist of FLAIR, PD, T1w, T1w-CE, and T2w images from a clinically diverse dataset from four centers with six scanners (1.5 and 3T). Exploratory Data Analysis, including lesion statistics (normalized volume, intensity & count) was performed. To qualitatively assess the model performance, one associate professor of neuroradiology and one senior radiology resident rated the predicted segmentations' quality from Greek hospital MR scans (N=15).

Results

The model demonstrated higher accuracy on FLAIR/PD images, DSC: 0.50±0.20 and NSD: 0.63±0.18mm while decreased performance observed for T1w, T1w-CE, and T2w, DSC: 0.39±0.20 and NSD: 0.56±0.20mm. Those findings show close agreement between model predictions and manual expert annotations across the three datasets, considering the high variability as depicted in lesion normalized volume (0.08±0.13) and intensity (0.16±0.22). The lesion count ranged between 6-162 per patient. The clinical feasibility study indicates a promising tool capable of generating acceptable quality MS brain lesion segmentations using only FLAIR scans.

Conclusion

Mindglide showed promising performance in segmentation of MS brain lesions but is less robust in specific cases (e.g., supratentorially located), requiring further optimization. The integration into PACS workstation proves the model's potential for routine use in Greek hospitals, marking a major step towards more efficient neuro-radiological flow.

(271) - PP-051

EXPLORING PATIENTS' PERSPECTIVES ON THE INTEGRATION OF ARTIFICIAL INTELLIGENCE INTO CLINICAL PRACTICE: A CROSS-SECTIONAL STUDY

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Introduction
Artificial Intelligence (AI) has already started to revolutionise medical imaging and radiotherapy, and nowadays many AI-powered applications exist to optimise workflows, increase diagnostic accuracy, facilitate treatment planning, and many more.

Purpose
This study aims to investigate patients' knowledge on the use of AI in healthcare, and in particular in radiology, and explore their perspectives on the new AI era.

Materials and Methods
This is a quantitative study, cross-sectional study. A specifically designed questionnaire was built, consisting of 13 closed questions. This was administered to users of radiology services across 2 different radiology departments, between April and July 2024. Statistical analysis was performed on the SPSS, version 24.

Results
In total, 96 responses were received. Most of them (67.7%) did not know what AI was. Only 26% of patients said that they would feel comfortable to receive their diagnosis from an AI-based system, while 88.5% of them would be more confident if there was human oversight. Almost half (47.9%) of them would not agree with AI systems processing their personal data. Two thirds (61.5%) believed that AI cannot replace human touch.

Conclusion
Most patients remain reluctant with the use of AI in healthcare; however, they do believe that AI will transform their care, and they are asking for patient involvement throughout this process.

BREAST IMAGING

(406) - PP-052
BREAST ABSCESS: ONE CASE IN A FIRSTBORN PREGNANCY DURING THE POSTPARTUM PERIOD

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Introduction
Breast Abscess: One case in a firstborn pregnancy during the postpartum period Breast abscess is mainly rare but important complication that take place in the postpartum period during breastfeeding in primiparous women. It is the result of an infectious mastitis as an inflammatory process, during lactate and it happens because of an occluded milk duct or an interrupt in the nipple's cutis. It is atypical in non-breast feeding population. The principal infectious organism is Staphylococcus aureus.

Purpose
We present the case of breast abscess in postpartum period, to emphasize the rare, but serious complication.

Materials and Methods
Hereby, the case of a 30- year- old primiparous woman, presented with intense pain near the nipple, fifteen days after giving birth. Ultrasound revealed a hypoechoic fluid collection with debris and peripheral vascularization. Her treatment was with antibiotics and aspiration. icion of malignancy.

Results
Ultrasound revealed a hypoechoic fluid collection with debris and peripheral vascularization. Her treatment was with antibiotics and aspiration. Ultrasound is considered the cornerstone method for diagnosis and mammography is used only in suspicious of malignacy. Typical imaging findings: such as hypoechoic, dark collection of fluid with inner partitioning and debris. There is a vascular rim in the walls and the nearby tissue.

Conclusion
Breast abscess is classified to: I) Puerperal abscess: during lactate in primiparous mothers. Ii) Non-puerperal abscess (central): mainly in young women and most commonly in smokers. Iii) Non-puerperal abscess (peripheral) and rarer: mainly in older women with other health issues, such as diabetes. Ultrasound is the best method to diagnosis for breast abscess. Imaging differential diagnosis includes: i) galactocele (with color Doppler, there is no vascularity) and ii) carcinoma of the breast.

(499) - PP-053
PRIMARY SQUAMOUS CELL CARCINOMA OF THE BREAST: MRI FINDINGS

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Introduction
Primary squamous cell carcinoma (SCC) is a well-known malignancy of the skin and various organs, composed of squamous cells that are not normally present in the breast. Therefore, it is rarely encountered in breast tissue and accounts for less than 0.1% of all breast carcinomas

Purpose
There are very few publications in the literature that describe the radiological imaging features of breast SCC. We aim to present the MRI findings of a patient diagnosed with SCC of the breast.

Materials and Methods
A 69-year-old female patient presented to our clinic with a palpable breast mass. Breast US, MRI , and US-guided core needle biopsy were performed.

Results
On physical examination, an ulcerated skin wound with hemorrhagic and purulent discharge accompanied the mass. MRI demonstrated a large mass (approximately 92x63 mm) causing volume increase in the right breast, infiltrating the skin anteriorly and the pectoral fascia posteriorly. The lesion showed heterogeneous signal intensity due to internal cystic necrosis and displayed irregular peripheral rim enhancement on postcontrast subtracted images. Additionally, a right internal mammary lymph node was identified. Pathological-appearing lymph nodes were also present in levels 1, 2, and 3 of the right axilla. A level 1 node showed central cystic necrosis and peripheral enhancement similar to the primary tumor. A core needle biopsy revealed moderately differentiated squamous cell carcinoma. Immunohistochemistry showed ER-, PR-, and CerB2 skor0, Ki-67 35–40% . Subsequent PET-CT and cranial MRI ruled out distant metastases or another primary malignancy.

Conclusion
Breast SCC does not exhibit distinct imaging features that differentiate it from other breast malignancies. However, in cases presenting with large breast masses, ulcerated skin lesions with purulent discharge, absence of calcifications on mammography, complex cystic areas on ultrasound, and multiple irregular thick-walled cystic areas with peripheral enhancement on MRI, primary breast SCC should be considered in the differential diagnosis.

(355) - PP-054

RETROSPECTIVE ANALYSIS OF ULTRASOUND RELIABILITY IN THE DIAGNOSIS OF BENIGN BREAST TUMOURS

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Introduction
Breast ultrasound (especially compared to digital mammography) is not generally considered as the state of art preventive methodology in the diagnosis of cancer because it is not unusual that some lumps that had appeared benign on the first diagnostics examinations, ended up with malignant findings.

Purpose
The main purpose of this retrospective analysis is to examine the frequency of above mentioned false negative results on the sample of female patients diagnosed with benign lumps in the population of Budva.

Materials and Methods
The database of all female patients for the first time diagnosed with benign breast tumours in the three and half year's period (2022, 2023, 2024 and first six months of 2025) was established. This database was compared with the medical records of newly diagnosed breast cancer within the same time frame.

Results
There were 256 in total newly diagnosed benign breast lumps within the observed period. Series of six cases with initial benign first ultrasound results and later pathohistological malignant finding was discovered. In these cases, other breast cancer risk factors were substantially present. Even though in one of them the malignant cells were discovered within fibroadenoma tumour.

Conclusion
In younger female patient with substantial risk factors and smaller tumours, benign ultrasound finding should not always be accepted as definitive and sometimes further diagnostic examinations must be conducted. Key words: Breast ultrasound, false negative results, breast cancer.

(343) - PP-055

THE ROLE OF ULTRASONOGRAPHY, MAMMOGRAPHY AND MAGNETIC RESONANCE MAMMOGRAPHY IN THE DETECTION OF INVASIVE LOBULAR BREAST CANCER

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Introduction

Invasive lobular cancer is the second most frequent pathohistological type of breast cancer and includes 5-15% of all invasive breast cancers. It represents a great challenge to radiological diagnostics, because it is extremely difficult to diagnose it with conventional radiological methods, mammography and ultrasonography, due to its morphological characteristics.

Purpose

To compare the importance of radiological diagnostic methods (ultrasonography, mammography, magnetic resonance mammography) in the detection of invasive lobular breast cancer, in patients with pathohistologically verified invasive lobular breast cancer.

Materials and Methods

This retrospective study included 70 patients with pathohistologically verified invasive lobular breast cancer who underwent radiological examinations at the Department for radiology diagnostics of the Institute of Oncology of Vojvodina, in the period from January 2020 to December 2022. Patients were divided into two groups. Group A consisted of 36 patients who underwent ultrasonography, mammography and magnetic resonance mammography. Group B consisted of 34 patients who underwent only ultrasonography and mammography.

Results

Depending on whether there was a multifocal or multicentric tumor or 1 cancer focus in the breast, a statistically significant difference between the examined groups was proven. Magnetic resonance mammography correlates best with pathohistology, when it comes to the dimensions of invasive lobular carcinomas and gives a better insight of the extension of the disease (multifocality and multicentricity). Groups A and B statistically significantly differ based on whether the primary surgical treatment was radical mastectomy or breast-conserving surgery.

Conclusion

Magnetic resonance mammography is superior to conventional radiological methods in determining the dimensions of invasive lobular cancers, as well as in the detection of multifocal and multicentric tumor processes.

(391) - PP-057

OPTIMIZING BREAST MRI WITH DELAYED E-THRIVE FAT-SATURATED CONTRAST SEQUENCE: ENHANCING LESION DETECTION AND CHARACTERIZATION

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Introduction

Magnetic Resonance Imaging (MRI) is a crucial modality in breast imaging, vital for the detection, follow-up, screening, and staging of breast cancer, particularly in high-risk patients and complex diagnostic scenarios. Standard multiparametric MRI (mpMRI) protocols typically include T2-weighted spin echo (T2W-TSE), inversion recovery (T2 STIR), diffusion-weighted imaging (DWI), and dynamic T1-weighted gradient echo (T1W GRE) sequences before and after intravenous gadolinium contrast. Contrast-enhanced sequences are paramount for evaluating lesion morphology, enhancement patterns, and characterizing lesions that may not be visible on conventional imaging. The delayed Enhanced T1 High-Resolution Isotropic Volume Examination (E-THRIVE) with fat suppression is a valuable addition, offering high spatial and temporal resolution to further improve diagnostic performance.

Purpose

This study aimed to demonstrate the clinical utility and image quality of the delayed E-THRIVE fat-saturated contrast-enhanced sequence in breast MRI. Our focus was on assessing its contribution to lesion detection, characterization, and overall diagnostic value within the breast imaging workflow.

Materials and Methods

We retrospectively analyzed breast MRI examinations performed on a 3T system that incorporated the delayed E-THRIVE fat-saturated sequence post-contrast administration. Experienced radiologists independently assessed key parameters including image sharpness, uniformity of fat suppression, and the efficacy of lesion detection. Representative cases were reviewed to illustrate typical imaging features and highlight their diagnostic outcomes.

Results

The delayed E-THRIVE fat-saturated sequence consistently demonstrated uniform fat suppression, providing excellent contrast and high-resolution depiction of enhancing lesions. This sequence significantly facilitated the visualization of subtle lesion morphology and contributed effectively to lesion classification, ultimately aiding in patient stratification and management planning.

Conclusion

The delayed E-THRIVE fat-saturated contrast-enhanced imaging sequence demonstrably improves the diagnostic performance of breast MRI. Its integration into standard MRI protocols is recommended to enhance clinical decision-making in comprehensive breast imaging.

CARDIOVASCULAR RADIOLOGY

(542) - PP-058

A SINGLE-CENTER EXPERIENCE OF MYCOTIC AORTIC ANEURYSM(MAA). DIFFERENTIAL DIAGNOSTIC PROBLEMS AND LIFE-THREATENING SITUATION.

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Introduction
Infected (Mycotic) Aneurysms are an uncommon serious common condition that is associated with significant morbidity and mortality. They pose a major clinical and diagnostic challenge due to the presence of a preceding systemic infection with bacterial pathogens. Infectious aortitis refers to a vascular infection without aneurysm dilation.

Purpose
Due to the challenge of the infected aneurysms, early clinical diagnosis is crucial because of the risk of rupture. Clinically apparent infected aneurysms are often at an advanced stage of development. Nontreatment or delayed treatment of them has a poor outcome with high morbidity and mortality from fulminant sepsis or hemorrhage. It is crucial the early diagnosis due to the difficulties in diagnosing.

Materials and Methods
In the last two years more than five patients came to the hospital with a fever of unknown origin. These patients aren't diagnosed due to the non-specific nature of these symptoms until severe complications such as sepsis, thrombosis, hemorrhage or rupture. These patients came to the Emergency Department (ED) the use of a CT detector is crucial due to the high quality spatial resolution of contrast-enhanced CT, the high sensitive imaging modality and the fast and easy access of the patient.

Results
Ct and Mri have moderately high sensitivities and specificities for mycotic aneurysms. They have replaced conventional angiography as minimally invasive techniques for detections of Mycotic aneurysms. At the ED a multidetector computed tomography is the state of the art imaging modality for early and accurate diagnosis.

Conclusion
Diagnosis of life-threatening MAA is extremely important because of the non-specific symptoms and negative blood cultures. The early identification of MAA with CT, MRI and FDG-PET/CT is crucial for improving patients outcomes. Clinicians (cardiologists, vascular surgeons, radiologists) must be acquainted with the clinical features of MAA to ensure accurate diagnosis, evaluation and management of the disease.

(478) - PP-059

THE ROLE OF CORONARY CT TOMOGRAPHY AS A GATEKEEPER OF ATYPICAL CHEST PAIN AT THE EMERGENCY DEPARTMENT .

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Introduction

Evaluating patients presenting to the emergency department (ED) with atypical chest pain remains a challenging process in diagnosing cardiac as well as non-cardiac events. Coronary computed tomography angiography (CCTA) has evolved to be a safe strategy for the diagnosis and stratification in evaluating and treating these patients.

Purpose

To review the complementary role of CT coronary angiography(CCTA) in the assessment of coronary and non-coronary findings in patients with atypical chest pain. To evaluate the coronary map,anatomical variants or potential life threatening situations. To analyze the key points for the diagnosis.

Materials and Methods

CCTA was performed in a 128-slice-MDCT, with ECG-gated retrospective acquisitions with iodinated contrast injection(120ml , 5ml/s, 40ml saline) .At heart rates >70 bpm a prospective ECG-gated aquizition is suggested. Images were analyzed in a dedicated post-processing software.

Results

CCTA can demonstrate : Coronary involvement - anatomical variants with benign and malignant morphology, - coronary plaque type(calcified ,partially calcified or with no calcifications / fibrofatty) ,its high-risk elements(low attenuation plaque, positive remodelling, spotty calcifications or napkin-ring sign)and the degree of stenosis - Coronary spasm, ulceration, rupture, inflammation(perivascular adipose tissue), dissection , aneurysm, vasculitis ,or fistula Non coronary involvement - Myocardial involvement with LGE evaluation(thinning ,crypts,aneurysms as post ischaemic lesions) - Pathological deposition of fat ,post myocarditis - Potentially malignant features of the valves(caceous calcifications, vegetations, prosthetic valve complications) - Acute aortic syndrome (aortic dissection ,aortic intramural hematoma, penetrating atherosclerotic ulcer) -Pulmonary embolism - Pericardium tamponade (non-neoplastic / neoplastic effusion) - Atrium thrombosis

Conclusion

CCTA plays a critical role at the ED with its many standard and developing applications. Recognizing specific coronary and non-coronary pathology in the setting of atypical chest pain is imperative for lower time to diagnosis, for planning possible interventional procedures, and guiding a personalized treatment.

(440) - PP-060
PRIMARY NEUROENDOCRINE TUMOR OF THE INTERVENTRICULAR SEPTUM

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Introduction
Primary cardiac tumors are rare, with reported incidence under 0.2%, and primary neuroendocrine tumors (NET) arising from the myocardium are extremely rare.

Purpose
We present a case of a primary NET incidentally detected in the interventricular septum of the heart, the location that, to the best of our knowledge, has not been previously reported in the literature.

Materials and Methods
The tumor was initially detected on echocardiography, which was performed as a part of the workup for back pain in a 56-year-old female patient, it was hypodense on computed tomography with significant contrast enhancement.

Results
Patient had no prior history of cancer or cardiac diseases, she had normal blood pressure, ECG and 24-hour ECG monitoring did not show any signs of arrhythmia, and cardiac specific enzymes were within reference levels. Cardiac MRI showed well-defined 50mm hypervascular lesion in mid septum, with early contrast enhancement during first-pass, and persistent homogeneous enhancement on late gadolinium images, which was in favor of benign tumor, differential diagnosis included NET and paraganglioma. Low 18-fluordeoxyglucose (FDG) uptake on PET/CT images further assured probable benign etiology. Although biochemical markers for both NET and paraganglioma were negative, tumor showed moderate somatostatin receptor expression on SPECT/CT scintigraphy, and biopsy confirmed low grade well differentiated NET. No other foci of radiopharmaceutocal uptake were detected with PET/CT and SPECT/CT images.

Conclusion
Majority of cardiac tumors are metastatic, and metastatic cardiac dissemination of NETs is very rare complication, while accurate diagnosis of primary NET without carcinoid syndrome is challenging and requires multimodality imaging with benefits of comprehensive evaluation to guide surgery and treatment decision.

(272) - PP-061

PULMONARY ARTERY AND BRONCHIAL ARTERY FISTULA COEXISTENCE IN VIEUSSENS ARTERIAL RING: A CASE REPORT

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Introduction

Pulmonary Artery-Vieussens Arteriel Ring Fistula is a rare vascular anomaly in which an abnormal connection exists between these coronary arteries and the pulmonary artery. Furthermore, to the best of our knowledge, no cases of a bronchial artery fistula associated with a condition similar to our case have been reported in the literature.

Purpose

To demonstrate the rare coexistence of Viussens Arteriel Ring (VAR), pulmonary artery and bronchial artery fistula through coronary CT angiography (CTA).

Materials and Methods

This case presents a patient with VAR and pulmonary artery fistula, coexisting a communication with posterior bronchial arteries identified through Coronary CT Angiography (CTA).

Results

1.Left anterior descending artery (LAD) is patent. 2.Right coronary artery (RCA) is patent. Long segment superficial bridging was observed in the mid RCA, which did not cause any significant calibration change. 3.Conus artery is variationally originating from the right coronary leaflet itself. 4.VAR was observed, which originates from the conus artery and anastomoses with the LAD septal branches. Also, posterior bronchial artery is opening in this vascular anastomose. 5.There is a fistula between pulmonary artery and VAR from a 24 mm-defect. 6.Left circumflex artery is patent. It is abnormally originating from the proximal right coronary artery. 7.There are retroaortic collaterals (Kugel artery) communicating with the VAR.

Conclusion

In this case, we demonstrate the coexistence of VAR with pulmonary artery fistula (PAF) and a communication with posterior bronchial arteries which remains a rare and often underdiagnosed condition. These fistulas can be detected effectively through CTA, which provides crucial imaging for diagnosis and treatment planning. In cases where CTA is inconclusive, cardiac catheterization can provide additional information, diagnosis and treatment in the same session.

(380) - PP-062

ULTRASOUND IN THE EARLY ASSESSMENT OF VERTEBRAL ARTERY VARIATIONS – A CASE REPORT

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Introduction

Vertebral arteries typically originate from the subclavian arteries and enter the transverse foramina of the cervical vertebrae at the level of C6, although some variations have been reported. The right vertebral artery rarely presents with an aberrant origin, compared to the left, which in approximately 6% of cases originates from the aortic arch. Early identification of these variations is clinically significant, as they may be associated with other vascular anomalies, an increased incidence of intracranial aneurysms, and a higher risk following surgery, endovascular treatment or trauma.

Purpose

The aim of this case report is to highlight the value of ultrasound in the incidental identification of vertebral arteries variations.

Materials and Methods

A 44-year-old male underwent Carotid and Vertebral Artery Triplex at our department as a part of screening routine.

Results

In this patient the right vertebral artery (RVA) was found to originate from the brachiocephalic trunk and ascend alongside the right common carotid artery, entering the transverse foramina of a higher cervical vertebra, approximately 1–2 cm proximal to the carotid bulb. The RVA exhibits normal antegrade flow direction, diameter, and flow velocity. To confirm and further characterize the anatomical variation, additional imaging with CTA or MRA was advised.

Conclusion

Ultrasound has a crucial role in the early detection of anatomical variations of the vertebral arteries as it is often the first-line imaging modality, particularly in younger patients. Radiologists should be aware of these variations to ensure accurate diagnosis, optimize patient care, and appropriately guide further diagnostic verification and clarification of the vascular anatomy.

(492) - PP-063

THE COMLEMENTARY ROLE OF CORONARY CT ANGIOGRAPHY AFTER INVASIVE CORONARY ANGIOGRAPHY

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Introduction

Computed tomography is an accurate, noninvasive alternative to ICA for imaging coronary arteries and the diagnosis of (CAD), in patients with stable chest pain with a high positive predictive value and even higher negative predictive value for obstructive CAD. ICA is the reference standard in the ED for the diagnosis of obstructive CAD which allows simultaneously performance of coronary revascularization during the same procedure. However, specific clinical scenarios, require also performing a CCTA for prompt diagnosis.

Purpose

To access the role of CT coronary angiography (CCTA) after invasive coronary angiography (ICA) beyond obstructive coronary artery disease (CAD) in patients at the Emergency Departmet (ED) with chest pain in specific clinical contexts. To describe key features for the diagnosis.

Materials and Methods

CCTA was performed in a 128-slice-MDCT, with ECG-gated retrospective acquisitions with iodinated contrast injection(120ml , 5ml/s, 40ml saline) . Images were analyzed in a dedicated post-processing software.

Results

Describing key features in patients who underwent ICA but required also performing a CCTA in cases of 1.CABG (especially in patients with unknown history) - for assessing the location and orientation of the coronary ostia - visualization of the right internal mammary artery and other conduits - thrombosed grafts, graft patency - thrombus in a cardiac chamber 2.Congenital or acquired coronary anomalies not be fully delineated by ICA 3.Facilitating PCI - Immediate reevavaluation of PCI - in chronic total occlusions in understanding antegrade and retrograde approaches 4.After congenital heart operations - Assessing the coronary arteries - Graft infections - Valves for thrombus, ,panus, endocarditis 5. After transcatheter aortic valve replacement(TAVR)

Conclusion

In certain cases CCTA may be requested after ICA. Especially in the setting of evaluating the spectrum of anatomical variations, previous procedural interventions or other cardiac pathologies the use of CCTA can also facilitate to the interventional cardiologists' workflow.

(479) - PP-064

MYOCARDIAL BRIDGE-INDUCED ATHEROSCLEROSIS: A FOCUS ON THE PRE-BRIDGE CORONARY SEGMENT

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Introduction

Myocardial bridging (MB) is the most common congenital coronary anomaly in which a segment of a coronary artery (CA) is tunneled within the myocardium. With the advancement and widespread use of coronary MDCT, detection rates of MB have significantly increased. Although traditionally viewed as a benign condition, certain morphological features such as the depth, length and multiplicity have been associated with elevated risk of cardiovascular complications, particularly atherosclerosis.

Purpose

We aimed to assess the prevalence of MBs, their characteristics and associated risk for pre-bridge plaque formation.

Materials and Methods

We retrospectively analyzed the data of 265 patients who underwent MDCT coronary angiography at the University Clinical Center of Serbia, performed during the year of 2024. Inclusion criteria were the presence of exercise-induced angina and/or other symptoms (fatigue, palpitations) not attributable to significant atherosclerotic stenosis ($\geq$70%). Deep MB was defined as myocardial depth of $\geq$3mm, and long MB as bridge length $\geq$25mm.

Results

Out of 265 analyzed exams, 61 (23.0%) had MB, with a minority of 3 patients showing two MBs on the same vessel. Average age of affected patients was 66.3$\pm$13.1 years. Mean MB depth and length were 2mm and 17mm, respectively. Sixteen (27.6%) patients had deep MD, while 18 (31.0%) had long MB. Most MBs (74.1%) were located on left anterior descending artery (LAD), precisely in its mid-segment (72.4%). Pre-bridge CA atherosclerotic plaque was observed in 23 (39.7%) cases, all being calcified and causing stenosis below significant level (<70%). Trend towards significance was noted for pre-bridge plaque formation in deep MBs (OR=3.625, [CI=0.797-16.481]; p=0.083), while no significant risk was found for long MBs (OR=0.791, [CI=0.257-2.435]; p=0.683).

Conclusion

Taking into account the small sample size, our findings suggest an association of deep MBs with an increased risk of atherosclerosis and the development of pre-bridge plaques, with no clear link to MB length.

(547) - PP-065

SEEING BEYOND HYPERTROPHY THROUGH CARDIAC MRI: A SINGLE-CENTER EXPERIENCE

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Introduction

Hypertrophic cardiomyopathy (HCM) represents a heterogeneous group of genetic heart disorders, predominantly characterized by left ventricular hypertrophy. Given its diverse clinical presentations and morphological variations, accurate diagnosis, risk stratification, and differentiation from phenocopies are crucial.

Purpose

This study aims to highlight the importance of cardiac magnetic resonance imaging (CMR) in providing detailed heart anatomy and enabling accurate diagnosis of subtype and severity of disease.

Materials and Methods

We examined and analyzed retrospectively 11 patients with HCM who underwent CMR in the 3T Philips Ingenia MRI scanner of "Evangelismos" Hospital from January 2024 to May 2025. Sequences include cine imaging for detailed morphological and functional assessment (e.g., wall thickness, ventricular volumes, outflow tract obstruction), flow quantifications, and late gadolinium enhancement (LGE) after 15 min for detection and quantification of myocardial fibrosis and disarray.

Results

In our single-center study, basal hypertrophy was observed in all 11 cases, medial in 10, and apical in 8, with 2 cases showing predominantly apical hypertrophy. Left ventricular outflow tract (LVOT) obstruction was mentioned in 4 cases, and myocardial crypts were identified in 3 cases. Furthermore, late gadolinium enhancement (LGE) was present in 8 cases. The severity of wall thickening was related to LVOT obstruction and impaired ejection fraction.

Conclusion

CMR plays a highly important role in recognizing the multifarious disease expression, ranging from asymptomatic incidental diagnosis to arrhythmias or sudden cardiac death. CMR also contributes to the differentiation of HCM from other causes of left ventricular hypertrophy with high accuracy.

(445) - PP-066

CARDIAC MRI IN THE DIAGNOSIS AND SURGICAL PLANNING OF A RARE PRIMARY CARDIAC TUMOR

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Introduction

Cardiac tumors are extremely rare and can be either primary or secondary. Among primary tumors, benign myxomas are the most common, while malignant and metastatic lesions are significantly less frequent. Cardiac magnetic resonance imaging (MRI) is the gold standard for morphological and functional characterization of cardiac masses, assessment of infiltration, and treatment planning.

Purpose

To present the diagnostic and surgical planning value of MRI in the evaluation of a rare cardiac mass, with emphasis on differential diagnosis and operability assessment.

Materials and Methods

A 72-year-old female patient with progressive fatigue and a history of pulmonary embolism underwent cardiac MRI following the detection of a left-sided paracardiac mass. The MRI protocol included T2-weighted and T2 fat-saturated sequences, cine TrueFISP images in multiple planes, and late gadolinium enhancement (LGE) sequences. Volumetric and functional parameters of both ventricles were calculated and indexed to body surface area (BSA). PET-CT was performed as part of a full oncological workup.

Results

MRI demonstrated a solid, well-circumscribed mass measuring 73 × 52 mm, located between the left atrium and ventricle, with pericardial infiltration but no myocardial or valvular invasion. The lesion showed discrete peripheral late enhancement and compression of cardiac chambers, with preserved biventricular systolic function (EF LV: 68%, EF RV: 57%). PET-CT showed moderate FDG uptake (SUV max 5.5) without signs of dissemination. Based on MRI findings, the tumor was assessed as operable and was completely resected without complications. Histopathological examination confirmed a primary low-grade melanotic malignant peripheral nerve sheath tumor (melanotic MPNST) with pericardial infiltration.

Conclusion

Cardiac MRI provides high-precision detection, localization, and characterization of cardiac and paracardiac masses. In this case, MRI played a central role in raising suspicion of malignancy, identifying pericardial infiltration, assessing operability, and guiding safe surgical management. This report highlights the diagnostic and therapeutic importance of MRI in rare and clinically challenging cardiothoracic tumors.

(546) - PP-067

GIANT INFECTED PSEUDOANEURYSM OF THE DEEP FEMORAL ARTERY AFTER PROXIMAL FEMORAL FRACTURE WITH SURGICAL INTRAMEDULLARY FIXATION

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Introduction

Pseudoaneurysm following hip fracture is a rare but potentially life-threatening vascular complication, often presenting with delayed and nonspecific symptoms. It may result from direct vascular injury during trauma or, more commonly, iatrogenic damage during surgical intervention. In cases with a high index of suspicion, to avoid severe complications, duplex ultrasound and conventional or CT angiography should be performed.

Purpose

This case report highlights the role of radiology in diagnosing vascular complications of hip fractures and showcase a rare and unusual presentation as a giant infected deep femoral artery pseudoaneurysm.

Materials and Methods

A 72-year-old male presented to the emergency department with an inguinal tumefaction. One month earlier, he had undergone surgical treatment of an intertrochanteric left femoral fracture with closed reduction and internal fixation using an intramedullary nail, followed by physical rehabilitation. Laboratory findings revealed mild anemia and elevated inflammatory markers.

Results

Initial Doppler ultrasound revealed a giant, partially thrombosed pseudoaneurysm measuring approximately 12 cm in diameter. CT angiography confirmed the diagnosis, identifying the profunda femoris artery as the source. The patient underwent emergency open vascular repair. Intraoperatively, purulent material and a foul odor were detected, prompting surgical debridement the following day. Despite negative bacterial cultures, a broad-spectrum antibiotic regimen was administered. The patient remained hospitalized for five weeks and was subsequently discharged for continued rehabilitation.

Conclusion

Radiological imaging plays a critical role in diagnosing vascular complications of proximal femoral fractures. This case represents a rare and severe example: a giant, infected pseudoaneurysm of the deep femoral artery following intramedullary fixation.

(497) - PP-068
IMAGING THE AORTIC SAC AFTER EVAR: THE ESSENTIALS

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Introduction
Endovascular aneurysm repair(EVAR) is a minimally invasive treatment for abdominal aortic aneurysms with a rate of complications ranging between 16 and 30%. Endoleak, the most common endograft device-related complication, occurs in 30-40%, reffering to the persistence of blood flow within an aneurysmal sac but outside the stented lumen. There are 5 types of endoleak. Other important complications include aneurysm expansion, and graft integrity ,limb kinking or stenosis and endograft infection.

Purpose
To review the complementary role of CTA/CEUS in the assessment of complications post-endovascular aortic repair (EVAR). To analyze the key points for the diagnosis.

Materials and Methods
Patients presented were scanned either on a routine basis or due to symptoms and imaging modalities included CTA, US/CEUS. Technical aspects and hints for an optimal MDCTA and CEUS will be highlighted, including the use of appropriate dose(90–130 ml bolus of iodinated high-concentration contrast medium through an automated injector ,flow rate of 3–5 ml/s) ,with optimal choice of phasing for the former and mechanical index and choice of imaging planes for the latter modality .

Results
A classification of the full spectrum of post-EVAR complications is proposed, in order to facilitate the systematic approach to these patients by the reporting radiologist. Complications can be categorized into i) intraluminal including thrombosis and dissection; ii) stent-related such as fracture and dislocation; iii) intra-aneurysmal including endoleaks and iv) organ-related including ischemia and necrosis. Normal post EVAR appearances and crucial pitfalls that can lead to misdiagnosis such as billowing and the presence of surgical and embolic material inside the aneurysmal sac will be presented, to familiarize diagnostic radiologists with these entities. The complementary use of CEUS and CTA will be illustrated through characteristic cases.

Conclusion
EVAR complications if not promptly identified can be life-threatening. Precise recognition of complications with CTA and CEUS are essential for postprocedural surveillance and a personalized treatment.

(544) - PP-069
DETAINED RUPTURE OF AORTIC ANEURYSM

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Introduction
Detained (subacute) rupture of an aortic aneurysm (AA) represents a critical clinical scenario with incomplete hemorrhage contained by surrounding tissues, often masquerading with non specific symptoms. Prompt diagnosis is vital to reduce mortality.

Purpose
To present the imaging features, diagnostic pathway, and clinical outcomes of a patient with detained AA rupture, emphasizing the pivotal role of advanced radiological techniques in guiding urgent therapeutic decisions.

Materials and Methods
We retrospectively reviewed three cases of detained rupture of AA, one in the thoracic region and two in the abdominal. All patients presented with abdominal/back pain and were hemodynamically stable. Contrast enhanced computed tomography angiography (CTA) was performed in all cases. Imaging criteria for detained rupture were assessed: periaortic hematoma, discontinuity of aneurysm wall, contained leak, and signs of impending rupture. Subsequent management plan and follow-up imaging were also analyzed.

Results
CTA revealed AAs with adjacent high attenuation periaortic fluid. Two of the cases showed hyperdense fluid collections capped by fat stranding and active extravasion of contrast media, consistent with a contained rupture.The other one case showed no active extravasation. The patients were transferred to a cardiovascular department for emergency treatment.

Conclusion
Detained AA rupture may present subtly but can be accurately diagnosed using CTA by identifying contained periaortic bleeding. Early recognition facilitates prompt treatment. Radiologists must maintain high clinical vigilance and familiarity with imaging signs of subacute aneurysm rupture to expedite life saving interventions.

(541) - PP-070

CARDIAC MAGNETIC RESONANCE EVALUATION OF MYH7 VARIANT-ASSOCIATED BIVENTRICULAR NON-COMPACTION CARDIOMYOPATHY

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Introduction

Non-compaction cardiomyopathy (NCCM) is a rare myocardial disorder characterized by an abnormally thick, sponge-like trabecular layer and a thinner compacted layer, predominantly affecting the left ventricle. It is commonly inherited, with genetic mutations particularly in sarcomere genes leading to abnormal heart muscle development and excessive trabeculations, although some rare acquired and reversible cases are known. NCCM is sometimes associated with congenital heart defects, out of which Ebstein anomaly is the most prevalent. Variable penetrance and different phenotypes of gene variant carriers make this entity still misunderstood with many considering it unclassified or a phenotype of other cardiomyopathies.

Purpose

To better understand this rare and still misclassified entity we present two cases of familial NCCM.

Materials and Methods

Two patients with NCCM were identified in our MRI center database in 2025, a 36-year-old female and 34-year-old male, siblings, with genetically and radiologically confirmed disorder.

Results

The female patient presented with frequent syncope and headache since adolescence. Cardiac MR (CMR) and genetic testing diagnosed her with a MYH7 mutation, a gene encoding the sarcomeric β-myosin heavy chain protein, resulting in biventricular NCCM with borderline ventricular function. This finding prompted family screening with positive results for her brother, 3-year-old niece, and uncle. The brother exhibited slight physical activity limitation (NYHA class II) with similar CMR findings of biventricular NCCM, Ebstein anomaly and reduced left ventricular function. Both siblings required drug treatment and further monitoring. Cardiac MR (CMR) is the diagnostic modality of choice, with a key diagnostic feature being a noncompacted-to-compacted layer telediastolic ratio greater than 2.3. Compared to echocardiography CMR provides more precise ratio measurement and superior visualization of ventricular thrombi and myocardial fibrosis.

Conclusion

Familial NCCM is a rare condition where CMR plays an essential role in diagnosis, follow-up, and family screening. Biventricular trabeculation is an unusual presentation and likely connected to specific MYH7 gene mutation phenotype.

(322) - PP-071

THE ROLE OF CARDIAC MAGNETIC RESONANCE IN PATIENTS WITH HYPERTROPHIC CARDIOMYOPATHY

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Introduction

Hypertrophic cardiomyopathy (HCM) is defined as a presence of left ventricular wall thickness more than 15 mm in one or more myocardial segments that is not caused by any other possible condition. HCM is a common cause of sudden cardiac death (SCD) in young people.

Purpose

The purpose was to detect myocardial fibrosis and to define people with increased risk of SCD

Materials and Methods

The study population consisted of 51 patients with HCM, with a mean age of 58±13 years, out of which 27 (52.9%) were male, without any other co-morbidities. All patients had cardiac exam, echocardiography and cardiac magnetic resonance (CMR). CMR was performed using standard pre-contrast and post-contrast sequences after 10 minutes of Gadolinium application.

Results

There were 41 (80.4%) cases of asymmetric HCM, out of which 8 (19.5%) had obstruction of left ventricle (LV) outflow, while apical HCM was noted in 10 (19.6%) patients. Inhomogeneous myocardium was detected in 20 (39.2%) cases, mostly located in septum 9.8% and apex 9.8%. Late gadolinium enhancement was detected in 39 (76.5%) patients, predominately with mesomyocardial distribution (51%), mostly located in septum (62.7%), anterior (51%) and inferior (31.4%) wall, but rather rare apically (17.6%). Degree of fibrosis was assessed at a median of 6% of left ventricle mass (range 0.8-46.5%), and a median of 11 g per left ventricle mass. LV ejection fraction (EF) mean value was 64.9 %. Degree of fibrosis significantly correlated positively with septal thickness and negatively LV EF ($p<0.01$). Statistically significant difference was shown between men and women in end-diastolic volume, end-systolic volume, (indexed) LV stroke volume, LV mass ($p<0.05$).

Conclusion

Detailed evaluation of myocardial tissue such as fibrosis presence and its quantification, with outflow obstruction and LV EF makes CMR essential tool for HCM assessment and further management.

EMERGENCY RADIOLOGY

(381) - PP-074

US TO THE RESCUE: UNRAVELING ACUTE DIVERTICULITIS WITHOUT THE RADIATION EXPOSURE

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Introduction

Diverticulitis is a common cause of acute abdominal pain, affecting nearly 5% of patients presenting to the emergency department (ED), often with pre-existing diverticulosis. While computed tomography (CT) is the standard for diagnosis due to non-specific symptoms, ultrasound (US) is increasingly recognized as a valuable, radiation-free alternative for bowel pathology. Despite common perceptions of technical difficulty, experienced sonographers demonstrate that US can play a key role in imaging conditions like diverticulitis.

Purpose

This study aims to analyze acute diverticulitis cases presenting at the ED of Evangelismos Hospital in Athens, Greece, and to assess the diagnostic utility of US imaging. Our hypothesis is that US could effectively visualize gut pathologies such as diverticulitis, thereby facilitating patient prioritization and potentially reducing the need for CT scans.

Materials and Methods

We retrospectively collected and analyzed 50 CT-confirmed acute diverticulitis cases presenting to our ED between June 2024 and June 2025. Patient demographics (age, sex) were recorded, along with whether an ED US was performed and its findings.

Results

The cohort comprised 54% females and 46% males, with a mean age of 61 years. An ED US was conducted in 78% of cases, typically preceding the CT scan. Of these US examinations, 67% yielded positive findings, including free fluid between pelvic bowel loops, bowel wall thickening, and/or the presence of inflamed diverticula. Crucially, 73% of these positive US scans specifically depicted inflamed diverticula, strongly indicating acute diverticulitis. Example images are used to illustrate these findings.

Conclusion

ED ultrasound can successfully identify findings consistent with acute diverticulitis, particularly when performed by experienced sonographers. This rapid, low-radiation imaging modality significantly enhances clinical and diagnostic reasoning, often enabling a definitive diagnosis or expediting subsequent investigations and patient prioritization.

(315) - PP-075

ULTRASOUND AS A FIRST-LINE ASSESSMENT TOOL FOR GASTROINTESTINAL TRACT DISEASES IN THE EMERGENCY DEPARTMENT

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Introduction

Gastrointestinal diseases are among the most common causes of acute abdominal pain. Differential diagnosis is often challenging and the exact symptoms and clinical signs are not always present. The role of ultrasound in diagnosing bowel diseases in the acute setting remains controversial due to the modality's operator-dependent nature, radiologists' lack of acquaintanceship with the normal and abnormal appearance of the bowel and the technical difficulties in gut imaging such as air-filled bowel loops or patient body habitus. Despite these challenges, ultrasound is a powerful tool for bowel assessment when performed by experienced radiologists.

Purpose

To highlight the role of ultrasound in the diagnosis of gastrointestinal tract diseases in the emergency department.

Materials and Methods

Eight illustrative cases were selected for their characteristic imaging findings, including three cases of acute appendicitis, two cases of acute diverticulitis, two cases of bowel space-occupying lesions, and one case of intussusception. All of these patients presented in the emergency department complaining of acute abdominal pain among other symptoms.

Results

Ultrasound enabled prompt identification of key pathological features in all cases, facilitating timely diagnosis and guiding clinical decision-making in the emergency department.

Conclusion

Ultrasound should be more widely appreciated for bowel assessment in the emergency department. One should not forget that ultrasound is an inexpensive and easily accessible imaging method that does not expose the patient to ionizing radiation, an extremely important fact for the pediatric population who frequently need imaging evaluation to confirm or exclude acute appendicitis or intussusception. Considering ultrasonography's advantages with the appropriate staff acquaintanceship, the modality can become a first assessment tool for gut disease in the emergency department.

(529) - PP-076

EARLY DIAGNOSIS AND ACCURATE STAGING OF SPLENIC TRAUMA USING FAST ULTRASOUND AND CT: A CASE-BASED APPROACH

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Introduction

Blunt abdominal trauma is a frequent emergency, and the spleen is the most commonly injured intra-abdominal organ. Prompt diagnosis is critical to reduce morbidity and mortality. We present a case of splenic trauma following a motorcycle accident, highlighting the combined diagnostic value of ultrasound (FAST) and CT imaging.

Purpose

To demonstrate the role of ultrasound in early detection and of computed tomography (CT) in accurate staging and surgical decision-making in cases of traumatic splenic injury.

Materials and Methods

A 45-year-old male presented to our emergency department after a motorcycle accident. A focused assessment with sonography for trauma (FAST) revealed a markedly heterogeneous spleen with indistinct margins and alternating hyperechoic, hypoechoic, and anechoic areas. A large subcapsular hematoma was identified, along with perisplenic and perihepatic free fluid. All the above findings were suggestive of splenic injury with rupture.

Results

Urgent contrast-enhanced CT confirmed the findings, showing a deep laceration of the splenic parenchyma with a large subcapsular hematoma and hemoperitoneum. A contained vascular injury with active contrast extravasation confined within the splenic tissue was identified. According to the AAST grading scale, the injury was classified as Grade IV. Immediate surgical intervention was recommended, and the patient underwent successful splenectomy with rapid and uncomplicated recovery.

Conclusion

FAST ultrasound plays a crucial role in the initial detection of intra-abdominal injuries in trauma patients. However, CT imaging remains the gold standard for confirming splenic trauma, assessing severity, identifying vascular complications, and guiding operative versus conservative management. This case underscores the complementary roles of both modalities in timely diagnosis and treatment of splenic trauma.

(486) - PP-077

MULTIDISCIPLINARY COLLABORATION IN EPIGASTRIC PAIN EVALUATION: FROM SUSPECTED PULMONARY EMBOLISM TO RUPTURED GALLBLADDER AND ABSCESS FORMATION.

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Introduction

Patients often present to the emergency department with non-specific symptoms, leading to significant diagnostic dilemmas. Epigastric pain has a wide differential diagnosis requiring systematic exclusion to ensure timely and accurate treatment [1].

Purpose

To highlight how the combination of laboratory and imaging findings, alongside multidisciplinary collaboration, led to the final diagnosis and appropriate management in a patient initially evaluated for pulmonary embolism [2].

Materials and Methods

A 70-year-old male with a medical history of hypertension and coronary artery disease presented to the emergency department with a one-week history of epigastric pain and low-grade fever. Initially referred to the cardiology department, pulmonary embolism was included in the differential due to elevated D-dimer levels [3], prompting a thoracic CT angiography with pulmonary embolism protocol.

Results

Although the CT was negative for pulmonary embolism, the lower sections revealed a thickened gallbladder wall. An upper abdominal CT was subsequently performed, revealing cholelithiasis, gallbladder wall thickening, and wall discontinuity suggestive of rupture, with intra-abdominal and intrahepatic fluid collections exhibiting peripheral enhancement indicative of abscess formation [4]. These findings were confirmed with ultrasound. The patient was admitted to the surgical department, where percutaneous drainage of the collections was performed under CT guidance. Spontaneous gallbladder perforation, although rare, should be considered in the differential diagnosis of acute abdomen in elderly patients with non-specific symptoms [5,6].

Conclusion

Given the frequent presence of comorbidities and non-specific symptoms in patients, multidisciplinary collaboration among cardiologists, surgeons, and clinical radiologists is essential for accurate and timely [2]. This case demonstrates the pivotal role of imaging and interdisciplinary teamwork in the diagnostic pathway, shifting the initial suspicion of pulmonary embolism to the identification of a ruptured gallbladder with abscess formation, ensuring the appropriate treatment strategy for the patient [1].

(386) - PP-078

ENHANCING EMERGENCY LIVER ASSESSMENT: THE ROLE OF CONTRAST-ENHANCED ULTRASOUND ABSTRACT

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Introduction

Contrast-enhanced ultrasound (CEUS), which involves the intravenous administration of microbubbles for in vivo visualization of blood flow and tissue perfusion, offers a readily available, simple, and cost-effective imaging modality. It's particularly advantageous in emergency settings and for patients with kidney injury or allergies to traditional contrast agents. While liver imaging is a common component of emergency ultrasound, the application of liver-focused CEUS has primarily been explored in outpatient or follow-up scenarios as supplementary imaging.

Purpose

This poster highlights the crucial role of liver-focused CEUS in emergency settings through illustrative case examples.

Materials and Methods

We selected emergency cases where initial ultrasound assessments revealed liver pathology, followed by focused CEUS imaging of the liver. A variety of pathologies were observed.

Results

The CEUS findings facilitated immediate differential diagnoses, allowed for risk stratification based on the identified pathology, and guided recommendations for appropriate further imaging. The ability of CEUS to provide rapid diagnostic insights, enabling the escalation and prioritization of cases for subsequent imaging, was clearly evident. In some instances, CEUS findings were compared with those from other imaging modalities.

Conclusion

Contrast-enhanced ultrasound of the liver in the emergency setting is a valuable, rapid, and accessible tool. Its capacity to deliver immediate perfusion information aids in early differential diagnosis, assists with risk stratification, and informs crucial clinical decisions. CEUS can effectively prioritize patients for additional imaging or intervention, ultimately leading to improved patient outcomes. Our cases demonstrate its significant potential as an imaging modality in acute care, especially when conventional imaging resources are limited or subject to delays.

(382) - PP-079

SPONTANEOUS ISOLATED SUPERIOR MESENTERIC ARTERY DISSECTION – A RARE CASE DIAGNOSED BY DOPPLER ULTRASOUND

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Introduction

Spontaneous isolated superior mesenteric artery dissection (SISMAD) is a rare entity with an incidence of 0.06%. Clinical presentation ranges from asymptomatic to acute abdominal pain, which can sometimes be fatal due to reduced intestinal perfusion and bowel ischemia. Therefore, prompt diagnosis is critical. While computed tomography angiography (CTA) and magnetic resonance angiography (MRA) are the preferred imaging modalities, ultrasound may serve as a valuable initial diagnostic tool in some cases. SISMAD's characteristic imaging findings include the presence of a flap and the formation of a false lumen within the SMA in acute phase, intramural hematoma, thrombosis and pseudoaneurysm formation.

Purpose

This case report aims to underscore the utility of ultrasound in the early detection of SISMAD.

Materials and Methods

A 49-year-old male presented to the emergency department of our hospital with acute abdominal pain of sudden onset following a meal. Doppler ultrasound was employed as the initial imaging modality to assess potential upper abdominal pathology.

Results

Ultrasound revealed a dilated SMA measuring up to 11.3 mm, with an echogenic intimal flap on B-mode imaging. Doppler ultrasound showed thrombosis of the false lumen and adequate flow in the true lumen with normal spectral Doppler waveforms. The abdominal aorta and the origin of the SMA appeared intact. These findings raised the suspicion of SISMAD, leading to further evaluation with contrast CT, which confirmed the diagnosis. The patient was managed conservatively with anticoagulant medication and close clinical follow-up.

Conclusion

Although SISMAD is uncommon, it carries the risk of serious complications if left undiagnosed. Thus, early detection is essential, particularly in settings where advanced imaging modalities are not immediately available. In such cases, ultrasound plays a crucial role as the first-line imaging technique for evaluating patients presenting with acute abdominal pain. Radiologists should be familiar with the US features of SISMAD to ensure timely and accurate diagnosis.

(390) - PP-080

THE ROLE OF IMAGING IN RIGHT-LOWER-QUADRANT ABDOMINAL EMERGENCIES – AN EDUCATIONAL CASE SERIES REVIEW

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Introduction

Acute abdominal pain, localized in the right lower quadrant is one of the most usual causes for visiting the ER. Apart from the possible gynecological etiologies, the responsible abdominal pathologies may vary; with appendicitis represent the vast majority.

Purpose

The same clinical presentation may be the result of various underling pathological conditions. The medical history, the physical exam and the laboratory test can lead to targeted imaging procedures, which will give the diagnosis.

Materials and Methods

We demonstrate nine different patients with right-lower-quadrant abdominal pain, who attended the ER of our Hospital and their clinical and laboratory presentations, were quite similar, which besides the abdominal pain included mild fever, increased amount of WBC and inflammatory markers.

Results

The underlying pathology finally varied. there were patients swith appendicitis (non- and compicated), mucocele of the appendix, ruptured and inflamed malignant lesion of the cecum with absess formation and consequential fasciitis of the abdominal wall, pelvic and right femoral muscles and even right-sided diverticulitis.

Conclusion

The role of imaging is crucial in acute abdomen, since ultrasound is used as the first approach, and a CT scan as the main tool for the final diagnosis in the emergency department.

(508) - PP-081

CT IMAGING FINDINGS OF HYPOVOLEMIA IN A POLYTRAUMA PATIENT: A CASE-BASED

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Introduction

Hypovolemia is a critical and potentially fatal condition in trauma patients, often resulting from either internal or external hemorrhage. While clinical signs may be subtle or delayed, CT imaging can provide early indicators of hypovolemic shock, guiding urgent intervention.

Purpose

To present a case of a polytrauma patient where CT imaging played a key role in diagnosing hypovolemia, and to highlight the radiologic signs associated with early shock.

Materials and Methods

A 43-year-old male was brought to the emergency department following a high-impact, blunt lower extremity trauma. He was hypotensive on arrival, with major external bleeding . A contrast-enhanced whole-body trauma CT was performed as part of the institutional trauma protocol.

Results

CT revealed comminuted, compound fracture of the left femoral bone, with no signs of abdominal trauma. Indirect signs of hypovolemia were noted: a collapsed inferior vena cava, narrowed abdominal aorta, bilateral adrenal hyperenhancement (shock adrenals), renal heterogenous enhancement and gallbladder mural hyperenhancement. These findings, consistent with the hypovolemic shock complex prompted immediate activation of the trauma team and emergent surgical intervention. The patient underwent temporary control of external bleeding, aggressive fluid resuscitation, and lower extrimity amputation with subsequent stabilization.

Conclusion

This case illustrates the importance of recognizing CT signs of hypovolemia in trauma patients, even if source of bleeding is obvious. Early identification of the hypovolemic shock complex can significantly impact patient triage and outcomes,reinforcing the radiologist's vital role in emergency care.

(313) - PP-082

ACUTE ABDOMINAL PAIN DUE TO SPONTANEOUS RECTUS SHEATH HEMATOMA (RSH): A RARE CLINICAL ENTITY

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Introduction

Spontaneous rectus sheath hematoma (RSH) is a rare cause of acute abdominal pain, often associated with abdominal trauma or anticoagulant use. It accounts for approximately 1.8% of acute abdominal pain cases, with reported mortality rates ranging from 4% to 25%.

Purpose

To present a case of spontaneous RSH in an elderly patient on anticoagulation therapy, highlighting clinical signs and the pivotal role of imaging in diagnosis.

Materials and Methods

A 76-year-old male presented with acute right pelvic and lower abdominal pain, triggered by intense coughing. He had no history of trauma but was receiving low-molecular-weight heparin for recent deep vein thrombosis. On examination: •Blood pressure: 130/86 mmHg •Pulse: 105 bpm •INR: 4.1 •Progressive decrease in hematocrit •Palpable tender mass in the right lower quadrant •Positive Carnett's sign •No peritonitis signs •Hemodynamically stable Ultrasound showed a mixed echogenic area within the rectus muscle, consistent with hematoma. CT scan confirmed a 7×10×26 cm oval heterogeneous mass (Berna Type II) displacing lower abdominal organs.

Results

Imaging confirmed a large, non-bleeding rectus sheath hematoma. No surgical intervention was required, and the patient was managed conservatively with close monitoring and supportive care.

Conclusion

Although rare, spontaneous RSH should be considered in elderly patients on anticoagulation therapy presenting with acute abdominal pain. Accurate diagnosis relies on clinical evaluation supported by ultrasound and CT imaging. Most cases, including this one, respond well to conservative treatment.

FEMALE PELVIC IMAGING

(494) - PP-083

THE ROLE OF MRI IN THE EVALUATION OF PLACENTA PREVIA: DIAGNOSTIC VALUE AND CLINICAL IMPACT

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Introduction
Placenta previa, defined as the abnormal implantation of the placenta over or near the internal cervical os, is a significant cause of third-trimester bleeding and peripartum complications. While ultrasound is the primary diagnostic tool, magnetic resonance imaging (MRI) provides superior tissue contrast and a wider field of view, which can be particularly useful in complex cases or when additional placental pathology is suspected.

Purpose
To assess the diagnostic utility of MRI in evaluating placenta previa, with emphasis on placental location, extent of cervical os coverage, and potential coexisting abnormalities such as accreta spectrum disorders.

Materials and Methods
A retrospective study was conducted on pregnant women (gestational age $\geq$ 20 weeks) with suspected placenta previa who underwent MRI between 2023 and 2025. MRI included T2-weighted and T1-weighted sequences in sagittal, axial, and coronal planes.

Results
Findings were analyzed in terms of placental position (complete, partial, marginal previa), cervical os involvement, and additional features suggesting abnormal invasion. MRI findings were compared with ultrasound, intraoperative observations, and delivery outcomes.

Conclusion
MRI is a valuable adjunct to ultrasound in the evaluation of placenta previa, especially in cases with posterior placentation, complex anatomy, or suspected placental invasion. It improves diagnostic confidence, aids in risk stratification, and supports individualized delivery planning to optimize maternal and fetal outcomes.

(496) - PP-084

THE ROLE OF MRI IN THE DIAGNOSIS OF PLACENTA ACCRETA SPECTRUM DISORDERS: A RETROSPECTIVE STUDY

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Introduction

Placenta accreta spectrum (PAS) disorders, including placenta accreta, increta, and percreta, are associated with significant maternal morbidity and mortality. Accurate prenatal diagnosis is critical for optimal obstetric management. While ultrasound is the first-line imaging modality, magnetic resonance imaging (MRI) offers superior soft tissue contrast and multiplanar capability, making it a valuable adjunct in equivocal or high-risk cases.

Purpose

To evaluate the diagnostic accuracy and clinical utility of MRI in the assessment of PAS disorders and its correlation with surgical .

Materials and Methods

This retrospective study includes pregnant women with suspected PAS who underwent MRI between 2021 and 2024 in a tertiary referral center. MRI findings were assessed for established imaging features of PAS, including dark intraplacental bands on T2-weighted images, placental bulge, uterine serosal breach, and abnormal vascularity.

Results

Final diagnosis was confirmed by intraoperative findings and histopathology where available. Sensitivity, specificity, and diagnostic accuracy of MRI were calculated.

Conclusion

MRI is a valuable diagnostic tool in the evaluation of placenta accreta spectrum disorders, particularly when ultrasound is inconclusive or when detailed anatomical assessment is required for surgical planning. Its high sensitivity and added anatomical information significantly contribute to improved maternal outcomes.

(474) - PP-085
MR IMAGING OF ENDOMETRIOSIS

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Introduction
Endometriosis is defined as chronic, estrogen-dependent inflammatory condition characterized by ectopic endometrial implants causing pain, infertility, and organ dysfunction. It presents in 20–50% of infertile women and affects 80% of women with chronic pelvic pain. MRI has high sensitivity and specificity in evaluating the extent of the disease, so radiologists play key role in the management of endometriosis.

Purpose
In this educational poster we review MRI findings in endometriosis. We present interesting cases from our Institution with the emphasis on deep infiltrating endometriosis.

Materials and Methods
There are three main types of endometriosis: superficial endometriosis, ovarian endometriomas and deep endometriosis. Superficial peritoneal endometriosis presents as small T1 hyperintense foci. Ovarian endometriomas have typical T1 hyperintense signal, T2 "shading" whereas deep infiltrating endometriosis (DIE) penetrate $\geq$5 mm beneath the peritoneal surface and present as T2 hypointense spiculated lesions. Furthermore, radiologist can differentiate active vs non-active (fibrotic) endometriosis. Active lesions appear T1 hyperintense due to inflammation and active bleeding and respond well to medical (hormonal) therapy. Non-active lesions appear T1 and T2 hypointense due to fibrosis and may require surgical treatment Indirect signs (loculated fluid, organ tethering, adhesions, hematosalpinx) are sometimes important imaging clues for radiologists.

Results
Interesting cases of endometriosis are presented in this poster with the detailed description of imaging findings.

Conclusion
The role of radiologist in MR imaging of this entity is as follows: early detection, mapping disease extent, differentiating active vs non-active disease and structured reporting.

(402) - PP-086

MASSIVE OVARIAN OEDEMA: AN INTERESTING CLINICAL ENTITY – CASE REPORT AND LITERATURE OVERVIEW

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Introduction

Massive ovarian oedema is a rare non-neoplastic clinicopathologic entity has a higher incidence in women during their second and third life decade. The oedema can be presented in one or both ovaries as a result of partial intermittent torsion of the ovarian pedicle that interferes to the venal and lymphatic drainage of the ovary.

Purpose

To underline the pathophysiological mechanism that lead to this rare clinical manifestation through the presentation of our case report that includes clinical reports, CT findings, live surgical view and histopathological confirmation. Combined with a literature overview on the subject.

Materials and Methods

• Abdominal-Ultrasound • CT • Laparotomy • Histopathological specimen A 16-year-old female was admitted in the ED for defuse abdominal pain. Her medical history was free and the clinical examination revealed a palpable abdominal mass. We performed a laboratory and radiological control. Abdomen CT revealed a cystic lesion (23cmx14cm) in the right oblique abdominal area. Laparotomy was performed and histopathological examination of the removed ‘‘mass’’. We continued with a literature overview on ovarian oedema.

Results

Massive ovarian oedema was the diagnosis, through laparotomy and histopathological examination we excluded malignancy and confirmed a triple partial torsion of the ovarian pedicle. Root cause of ovarian oedema is lymphatic drainage dysfunction of the ovary which may be caused by ovarian torsion, lymphomas or carcinomas. Radiological findings included a cystic like lesion in the anatomical region of the right ovary extending upwards towards the liver and fluid collection in the Douglas region.

Conclusion

Ovarian oedema although ‘‘tumor-like’’ is a benign rare clinical manifestation in most cases associated mainly with ovarian torsion but rarely a result of carcinomas. The histopathological examination is pathognomonic . As for the radiological findings, mass effect of the enlarged ovary with a cystic like presentation are often hard to miss but crucial for the therapeutic process.

(349) - PP-087
KRUKENBERG TUMORS

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Introduction
Krukenberg tumors are metastatic tumors to the ovary that contain well-defined histological characteristics (mucin-secreting "signet ring" cells) and usually originate in the gastrointestinal tract (GIT), most common stomach and colon. They tend to develop during the reproductive years. Approximately 80% of tumors are bilateral. Presenting symptoms are: abdominal or pelvic pain, abdominal bloating, nausea, vomiting or pain during intercourse. Sometimes primary tumor can be small, asymptomatic and hard detectable. The survival of patients with Krukenberg tumors is very poor. Primary tumors metastasize to the ovaries through lymphatic channels, blood vessels, and peritoneal cavity.

Purpose
The purpose of this case is that when we see bilateral ovarian masses on imaging, we do not think only of primary ovarian tumors, but rather pay attention to possible other primary site, such as the gastrointestinal tract.

Materials and Methods
This was the case of a 29-year-old woman with symptoms such as vomiting for three days (dark stomach content and food), stomach pain, and loss of appetite. Laboratory tests showed anemia, and an abdominal ultrasound was normal. Pelvic ultrasound showed bilateral ovarian masses. During hospitalization CT and MRI of the abdomen and pelvis were performed.

Results
CT and MRI examination of abdomen and pelvis reviled bilateral ovarian masses that were nearly symmetrical, lobulated, solid with cystic component, with post-contrast enhancement. Thickening of the antropyloric wall of the stomach was observed. On MRI ovarian masses were complex with T1w and T2w hypointense solid components, with internal T2w hyperintensity with cystic component and restricted diffusion. This was followed by gastroscopy and ph verification of changes in the antropyloric region which showed signet ring gastric adenocarcinoma. The patient is undergoing systemic chemotherapy using the FOLFOX protocol.

Conclusion
In young women with bilateral ovarian mass we must think about Krukenberg tumors, and look for primary tumor usually originated from GIT.

HEAD AND NECK RADIOLOGY

(481) - PP-088

A RARE CASE OF SYNOVIAL CHONDROMATOSIS OF THE TEMPOROMANDIBULAR JOINT

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Introduction

Synovial chondromatosis (SC) is an uncommon, benign monoarticular disorder caused by free hyaline cartilaginous bodies resulting from synovial membrane cell proliferation. The condition primarily affects large joints (knee, hip, and shoulder) and is extremely rare in the temporomandibular joint (TMJ). Its incidence in this area remains poorly defined, with a slight predominance among females aged 30–50 years.

Purpose

To present a rare case of synovial chondromatosis involving the temporomandibular joint.

Materials and Methods

Clinical, laboratory, and imaging findings are described in a 50-year-old female patient with a swelling in the left preauricular region, along with the surgical approach followed. The patient presented with a gradually enlarging, painless swelling in the left TMJ area. The laboratory findings were within normal limits. Computed tomography (CT) revealed disruption of trabecular bone architecture in the left TMJ, accompanied by areas with sclerosis and hyperostosis, as well as small osteolytic foci in the scapular bone. Additionally, minor intra-articular calcifications (grains of rice), thickening of adjacent soft tissues, and joint space widening were noted. Based on the imaging findings, the differential diagnosis included synovial chondromatosis and osteosarcoma. Two preoperative fine needle aspirations (FNA) were inconclusive, raising a strong suspicion of malignancy. However, intraoperative rapid biopsy suggested benign pathology consistent with SC.

Results

As a result, the patient underwent left condylectomy, resection of the articular eminence and removal of the zygomatic arch. Postoperatively, no local recurrence was observed, and facial nerve function was preserved.

Conclusion

This case highlights the importance of recognizing the characteristic radiological features of SC. In rare cases, where histopathological confirmation is inconclusive, these imaging findings can modify the therapeutic strategy.

(513) - PP-089

MULTIMODALITY IMAGING OF PAROTID GLAND TUMORS; A DIAGNOSTIC CASE SERIES OF WARTHIN TUMORS AND THEIR MIMICS.

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Introduction

Parotid gland tumors encompass a wide spectrum of histologic subtypes, many of which exhibit overlapping imaging features despite different biological behaviors. Differentiating between these lesions based solely on imaging can be challenging, especially in cases initially suspected to be Warthin tumors. Given the subtle differences in appearance among benign and malignant entities, definitive diagnosis is made by histopathological evaluation.

Purpose

To present a diagnostic case series of parotid gland tumors with imaging findings suggestive of Warthin tumors, and to underscore the diagnostic difficulty in distinguishing these lesions from their mimics—even when using advanced multimodality imaging. The study highlights how in which cases imaging alone falls short and reinforces the need for biopsy.

Materials and Methods

This case series includes ten patients with parotid gland masses evaluated using ultrasound (US), computed tomography (CT), magnetic resonance imaging (MRI), and positron emission tomography (PET/CT). All lesions exhibited imaging characteristics of Warthin tumors. Final diagnoses were confirmed via fine-needle aspiration or surgical excision.

Results

Of the ten cases, six were histologically confirmed as Warthin tumors. The remaining four were pleomorphic adenomas, a fibroma, and a low-grade mucoepidermoid carcinoma. Despite their different pathology, all lesions shared overlapping imaging appearances, such as well-circumscribed borders and cystic or partially cystic architecture. Subtle features such as heterogeneous internal structure or mildly irregular margins were the only distinguishing clues in some cases, underscoring the limitations of imaging-based diagnosis.

Conclusion

The imaging features of Warthin tumors can closely resemble those of both benign and malignant parotid lesions, making noninvasive differentiation extremely challenging. While multimodality imaging is a valuable diagnostic tool, it is often insufficient to reach a definitive diagnosis. Biopsy remains essential for accurate characterization, especially when imaging findings are equivocal or atypical.

(489) - PP-090

RETROGRADE EXTERNAL CAROTID ARTERY FLOW: AN ULTRASOUND EVALUATION

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Introduction

Retrograde flow in the external carotid artery (ECA) is an uncommon hemodynamic event, usually linked to significant common carotid artery stenosis (CCA). While collateral flow patterns are well-documented in the vertebral and subclavian arteries, retrograde ECA flow supplying internal carotid artery (ICA) is uncommon and clinically relevant.

Purpose

This report aims to highlight the diagnostic value of Triplex Ultrasound in identifying retrograde flow in ECA and to evaluate the hemodynamic role of this reversed flow as a collateral pathway to the ICA in patients with high-grade CCA stenosis.

Materials and Methods

We evaluated three elderly patients who presented with acute or subacute ischemic symptoms—such as hemiparesis, visual disturbances and speech difficulties. All underwent triplex ultrasonography, which demonstrated retrograde ECA flow and high-grade ipsilateral CCA stenosis. ICA and vertebral artery flows were antegrade in all cases, excluding subclavian pathology.

Results

In each case, the Doppler waveforms of both the ECA and ICA were monophasic and low-resistance, indicating altered flow dynamics and collateral circulation. As part of this hemodynamic adaptation, ECA is supplied in a retrograde fashion by several of its branches, such as the occipital, maxillary, ophthalmic, superior thyroid and facial arteries, which, in turn, receive blood from collateral connections originating from vertebral and deep cervical arteries. Triplex ultrasound effectively quantified peak systolic velocity (PSV), end-diastolic velocity (EDV), resistance index (RI), and blood flow volume, while also clearly depicting flow direction and the characteristic spectral Doppler waveform.

Conclusion

Retrograde ECA flow supplying the ICA represents a rare but crucial collateral route in severe CCA stenosis. The ability of Triplex Ultrasound to offer real-time, non-invasive, and radiation-free vascular assessment makes it fundamental in understanding true hemodynamic adaptations and in clinical decision-making for patients with suspected cerebral hypoperfusion.

(327) - PP-091
SHEAR WAVE ELASTOGRAPHY IN DIFFUSE THYROID DISEASE

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Introduction
Most studies on the role of shear wave elastography in the thyroid disease have been focused on nodules so far. There is only a limited number of studies concerning shear wave elastography in diffuse thyroid disease.

Purpose
To evaluate the contribution of shear wave elastography to ultrasonographic assessment in diffuse thyroid disease (Graves-Basedow disease and various types of thyroiditis), specifically to evaluate the stiffness of the thyroid gland in diffuse thyroid disease and compare it with healthy controls.

Materials and Methods
A total of 46 patients with diffuse thyroid disease were examined clinically, by conventional ultrasound, and shear wave elastography. The conventional ultrasound parameters followed were: volume, margin quality, presence of nodules, and vascularization. We measured the mean, minimum, and maximum stiffnesses by shear wave elastography. Results were correlated with values in 128 healthy subjects.

Results
Patients with diffuse thyroid disease had significantly higher mean and maximal stiffnesses of the thyroid gland: 12.5 ± 5 kPa and 35.3 ± 12.8 kPa, respectively, and lower minimal stiffness: 0.5 ± 0.6 kPa than the healthy control group with mean, maximal, and minimal values of 9.5 ± 3.6 kPa, 22.5 ± 7.3 kPa, and 2.2 ± 2.1 kPa ($p<0.001$). Stiffness values were positively correlated with BMI and volume of the thyroid; they did not correlate with margin quality, presence of nodules nor vascularization. Compared with healthy volunteers, thyroid glands of patients with diffuse thyroid disease had a blurred margin more frequently and the amount of nodules and vascularization were higher. Patients with Graves-Basedow disease did not have significantly different mean, maximal, nor minimal stiffnesses than those with thyroiditis.

Conclusion
Both mean and maximal stiffness of the thyroid gland are significantly higher in diffuse thyroid disease than in the healthy population, while minimal stiffness is lower.

(329) - PP-092

RHINOLITH IN THE FOSSA OF ROSENMÜLLER

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Introduction

Rhinoliths are calcified entities which form when a layer of calcium and magnesium accumulates around intranasal foreign bodies or body tissue. The most common location is in the floor of the nose. Larger ones may present with unilateral rhinorrhea, nasal obstruction and foul-smelling breath. Their occurrence in the fossa of Rosenmüller (a lateral nasopharyngeal recess near the Eustachian tube) is exceedingly rare.

Purpose

To present the imaging features and clinical relevance of an infrequent case of a patient with a rhinolith found in the fossa of Rosenmüller, giving emphasis on the role of radiology in diagnosis.

Materials and Methods

A 56-year old male with a year-old history of tinnitus, otalgia, bad breath and a globus sensation was referred for a non-contrast head and neck CT scan, following multiple nasal endoscopies sinus x-rays, all with unremarkable findings.

Results

CT scan revealed a 35mm homogeneously hyperdense lesion, consistent with calcification, in the right fossa of Rosenmüller, at the opening inferior of the right Eustachian tube. There was no surrounding tissue edema, bony erosion or any other malignant features. Subsequent surgical removal and histological examination confirmed the diagnosis of a rhinolith. The patient's symptoms resolved postoperatively.

Conclusion

Rhinoliths in the fossa of Rosenmüller are rare and can present with nonspecific otolaryngological symptoms depending on their size. CT is the imaging modality of choice for the diagnosis. Radiologists should be prepared to include this pathology in the list of differentials for calcified masses detected in the nasopharyngeal region.

(332) - PP-093

BEYOND THE VOCAL CORDS: ULTRASOUND AS A WINDOW TO LARYNGEAL PATHOLOGY

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Introduction

Laryngeal cancer represents a significant clinical challenge requiring a multimodal diagnostic approach. Although diagnosis traditionally relies on endoscopic evaluation, ultrasound imaging might serve as a valuable complementary tool, particularly for evaluating cervical lymphadenopathy and detecting structural abnormalities. Effective sonographic assessment requires comprehensive understanding of normal laryngeal anatomy.

Purpose

To demonstrate the role of ultrasound in laryngeal cancer evaluation. To identify key sonographic features and recognize indications for further investigation based on ultrasound findings. To emphasize the importance of anatomical knowledge and systematic approach in ultrasound examination.

Materials and Methods

Five patients underwent neck ultrasound examination in our department having been referred for cervical lymphadenopathy of unknown origin (n=3) and post-endoscopic evaluation of suspected laryngeal malignancy (n=2). All examinations were performed with high-frequency linear transducers (7-15 MHz) and we assessed the laryngeal architecture including thyroid cartilage, vocal cords, and surrounding soft tissues.

Results

The radiologist must be thoroughly familiar with the sonographic appearance of normal laryngeal structures, including the thyroid cartilage, vocal cords and surrounding soft tissues. Abnormal findings in our series included disrupted tissue planes, asymmetric echogenicity, irregular structural margins, and altered vascular patterns on Doppler imaging. Patients with lymphadenopathy demonstrated corresponding cervical nodal abnormalities, while post-endoscopic cases showed structural changes correlating with endoscopic findings. All the tumours were proven to be squamous cell carcinomas and the suitable treatment method was selected.

Conclusion

Ultrasound provides valuable diagnostic information in laryngeal cancer evaluation when performed by radiologists with detailed knowledge of laryngeal anatomy and could be used as a valuable supplementary imaging method to CT and laryngoscopy. Recognition of subtle architectural disturbances guides appropriate clinical decision-making and enhances the multimodal diagnostic approach to laryngeal pathology.

(438) - PP-094

DISCORDANCE BETWEEN HIGH TI-RADS SCORE AND BENIGN CYTOLOGY: A CASE SERIES OF THREE MALE PATIENTS

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Introduction

The ACR TI-RADS system provides a structured approach to thyroid nodule risk stratification, supporting decisions for biopsy. However, nodules with high TI-RADS scores (IV–V) may yield benign results upon fine needle aspiration (FNA), raising management dilemmas.

Purpose

To present three male patients with TI-RADS IV–V nodules and Bethesda II cytology, exploring the clinical implications of imaging–cytology discordance.

Materials and Methods

Three male patients (aged 46–82) underwent thyroid ultrasound and FNA for suspicious nodules. Nodules were scored using ACR TI-RADS criteria and aspirates classified using the Bethesda system. Follow-up data were reviewed when available.

Results

Case 1: A 46-year-old male with a solid, taller-than-wide, isoechoic/heterogeneous nodule (3.3×2.9×2.5 cm) with central vascularity and hypoechoic halo in the right lobe. Classified as TI-RADS IV. FNA cytology: Bethesda II Case 2: A 68-year-old male with a hypoechoic, irregular, taller-than-wide nodule (1 cm) in the right lobe. Classified as TI-RADS V. FNA cytology: Bethesda II Case 3: An 82-year-old male with a complex, mildly vascular, mixed-echogenicity nodule (2.1×1.9×1.3 cm) with coarse calcifications in the right lobe, scored TI-RADS V. FNA in 2021 (Bethesda II), with stable imaging in serial ultrasounds over three years.

Conclusion

Despite highly suspicious ultrasound features, all three nodules proved benign on FNA. This highlights the limitations of ultrasound-based scoring when used in isolation. Integrating cytology, patient age, and longitudinal follow-up is crucial to avoid overtreatment. ACR TI-RADS remains a valuable triage tool, but must be interpreted in the broader clinical context.

(469) - PP-095

THYROID ANAPLASTIC CANCER WITH THE PRESENCE OF NODULE WITH AIR BUBBLES AND ESOPHAGEAL INFILTRATION

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Introduction

Thyroid cancer is the most common endocrine malignancy. Anaplastic thyroid carcinoma is a very aggressive and rare type of primary thyroid tumors and has the worst prognosis. It occurs in elderly people and mainly in women. Patients complain for dyspnea, dysphagia, weight loss or even hemoptysis and they present late to doctor with a painful neck swelling. Ultrasound reveals an infiltrative lesion with non homogenous echogenicity, nodules with calcification and increased vascularity. Biopsy and more specific core biopsy is the answer in suspicious of anaplastic thyroid tumor.

Purpose

The purpose of this announcement is to highlight the meaning of a case of thyroid anaplastic carcinoma with the presence of nodule with air bubbles and esophageal infiltration. A rare complication of thyroid cancer.

Materials and Methods

Hereby, we present the case of an 80-year-old female patient, with dementia, who came in our hospital complaining for dyspnea. Her relatives also mention difficulty swallowing. From the emergency, doctors asked for a CTPA in suspicious of pulmonary embolism. An additional ultrasound was also performed.

Results

Ct revealed a sizable enlargement of the left thyroid lobe with heterogenous echogenicity, increased vascularity, multilobulated borders, multiple calcifications nodule with air bubbles and esophageal infiltration.

Conclusion

The first imaging tool for detection and diagnosis of the thyroid cancer remains ultrasound. Because of its limitations in extrathyroidal invasion, Ct is a better and more effective technique to reveal involveness with neighboring organs, such as trachea, esophagus larynx or even the extension to the carotid vessels. Ct with contrast enhancement has better results in imaging and determining the evaluation of extrathyroidal invasion. It’s very important the early diagnosis because of the high risk of mortality.

(439) - PP-096

AGE-INFORMED MRI ASSESSMENT OF NASOSINUSAL MASSES: TWO CONTRASTING CASES

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Introduction

Sinonasal space-occupying lesions exhibit diverse etiologies, often age-dependent. MRI offers key information on tissue composition, vascularity, and lesion extent, aiding differential diagnosis.

Purpose

To highlight the diagnostic value of age-adapted MRI interpretation in sinonasal pathology, through two cases with overlapping locations but distinct imaging and clinical profiles.

Materials and Methods

Two patients underwent contrast-enhanced MRI for evaluation of nasosinusal masses. Lesions were assessed based on signal intensity, enhancement, extension, diffusion characteristics, and patient age.

Results

•Case 1: A 14-year-old boy presented with a large, ill-defined, heterogeneously enhancing lesion involving the nasopharynx, right sphenoid sinus, and parapharyngeal space. The mass included cystic areas with high T1 signal (suggesting proteinaceous content) and showed multiple signal voids on T2-weighted images, indicative of prominent vascular channels (flow voids). No diffusion restriction was noted. Imaging findings were characteristic of juvenile nasopharyngeal angiofibroma. Case 2: A 79-year-old man presented with a destructive, expansile mass involving the left nasal cavity, ethmoid and frontal sinuses, bilateral orbits, and sphenoid sinus. The lesion exhibited bone erosion, orbital compression, heterogeneous post-contrast enhancement with necrotic areas, and no diffusion restriction. Imaging was highly suggestive of sinonasal undifferentiated carcinoma (SNUC) or other high-grade malignancy.

Conclusion

MRI interpretation guided by patient age refines the differential diagnosis of sinonasal masses. In adolescents, benign hypervascular tumors like angiofibroma are common, whereas in elderly patients, aggressive neoplasms such as SNUC should be prioritized. An age-informed imaging approach enhances diagnostic accuracy and clinical decision-making.

(490) - PP-097

VERTEBRAL ARTERY STENOSIS: THE ROLE OF ULTRASONOGRAPHY IN DIAGNOSIS

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Introduction

Stroke is the fifth leading cause of death and a major source of long-term disability. Posterior circulation strokes, are approximately around 20–25% of ischemic strokes, are often due to vertebral artery stenosis (VAS), primarily caused by atherosclerosis. Symptoms of VAS include vertigo, dizziness, diplopia, nystagmus, nausea, ataxia, and numbness. Duplex ultrasonography (DUS) is a widely used, non-invasive diagnostic tool due to its safety, accessibility, and cost-effectiveness. However, its accuracy can be limited by vertebral artery anatomy. The incorporation of color Doppler and specific velocity criteria has improved diagnostic precision.

Purpose

To review the causes and clinical presentation of VAS and assess the value of DUS in its initial evaluation.

Materials and Methods

A narrative review of current literature was performed, focusing on DUS in diagnosing VAS. Additionally, three anonymized patient cases were assessed using established Doppler criteria.

Results

Literature supports the use of DUS to estimate stenosis severity. Key indicators of $\geq$ 50% stenosis include PSV > 108 cm/s, EDV > 36 cm/s, PSV ratio > 2.2, and EDV ratio > 1.7. In our case series, two of three patients met these criteria.

Conclusion

Undiagnosed or untreated VAS is associated with increased risks of stroke, myocardial infarction, and sudden cardiac death. DUS is a useful initial screening tool, but confirmation with advanced imaging modalities such as CTA, MRA, or DSA is essential for definitive diagnosis and treatment planning.

(464) - PP-098
PLEOMORPHIC ADENOMA OF THE LACRIMAL GLAND IN A TEENAGE GIRL

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Introduction
Pleomorphic adenoma of the lacrimal gland (PALG) is the most common benign epithelial tumor in this region, but its occurrence in children is extremely rare. Pleomorphic adenoma of the lacrimal gland accounts for more than half of epithelial forms of lacrimal gland tumors. It is a benign, slow-growing tumor that usually affects adults in the 4th decade of life. We present an unusual case of pleomorphic adenoma of the lacrimal gland in a teenage girl. It should be surgically removed intact to prevent malignant transformation and recurrence. Its treatment, radiological findings and outcomes are also described, with a brief review of the literature.

Purpose
We present a rare case of asymptomatic pleomorphic adenoma in a child, highlighting the clinical and radiological features that guide appropriate management. PALG tends to recur unless complete excision is performed. Rarely, there is a possibility of malignant transformation to carcinoma ex pleomorphic adenoma.

Materials and Methods
A case of a young patient with a painless orbital mass was analyzed. There were no classic signs such as painless proptosis, diplopia, ptosis or reduced vision. The lesion was initially unrecognized. Imaging studies (MRI), clinical evaluation and histopathological analysis were used in the diagnostic process.

Results
The tumor appeared as a well-circumscribed mass located in the orbital lobe of the lacrimal gland. Complete excision was performed by lateral orbitotomy without prior biopsy. Histopathology confirmed the diagnosis of pleomorphic adenoma. No recurrence was observed during postoperative follow-up and imaging studies.

Conclusion
Pleomorphic adenoma of the lacrimal gland may occur extremely rarely in pediatric patients. Clinical suspicion supported by imaging (CT and MRI) is essential for visualization of the tumor, assessment of its extent, and assessment of bone involvement. Timely surgical excision with intact capsule ensures an excellent prognosis, reducing the risk of recurrence and malignant transformation.

(466) - PP-099

PLEOMORPHIC ADENOMA WITH ONCOCYTIC METAPLASIA CLINICALLY AND RADIOLOGICALLY MIMICKING PARAGANGLIOMA: A CASE REPORT

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Introduction

Pleomorphic adenoma is the most common benign tumor of the parotid gland, typically presenting as a painless, slow-growing mass. Although usually straightforward to diagnose, some variants may display atypical clinical and imaging features, complicating the differential diagnosis. Rarely, tumors with oncocytic metaplasia and marked vascularity can mimic highly vascular lesions such as paragangliomas.

Purpose

To present a diagnostically challenging case of pleomorphic adenoma with oncocytic metaplasia, which radiologically and cytologically mimicked a paraganglioma, and to emphasize the importance of multidisciplinary diagnostics.

Materials and Methods

A middle-aged male presented with a painless mass in the right parotid region, causing discomfort while chewing. Fine-needle aspiration (FNA) revealed an oncocytoma. CT imaging demonstrated a well-defined, mildly lobulated lesion (2.3 x 2.7 x 3.7 cm) extending into the stylomandibular canal and deep parotid lobe. The lesion showed intense contrast enhancement in the arterial phase with prominent vascular supply from external carotid artery branches and rapid contrast washout in the parenchymal phase, raising suspicion for paraganglioma. Angiography confirmed hypervascularity, and partial embolization via the posterior auricular artery was performed. Surgical resection followed 24 hours later.

Results

Initial histopathological diagnosis was inconclusive. Upon revision with immunohistochemistry, a definitive diagnosis of pleomorphic adenoma with prominent oncocytic features was established.

Conclusion

This case highlights a rare diagnostic pitfall where pleomorphic adenoma mimicked both oncocytoma and paraganglioma due to its cytological and vascular characteristics. Accurate diagnosis required a combination of imaging, histopathology, and immunohistochemistry. This emphasizes the need for a multidisciplinary approach in the evaluation of parotid gland tumors with unusual presentations.

(463) - PP-100

ECTOPIC PARATHYROID ADENOMA IN AN ATYPICAL CERVICAL LOCATION: MULTIMODAL IMAGING AND SURGICAL CONFIRMATION

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Introduction

Ectopic parathyroid adenomas may present in anatomically atypical locations, which complicates preoperative localization and treatment. They are responsible for approximately 20% of primary hyperparathyroidism cases.

Purpose

To present a surgically and histologically confirmed case of an ectopic parathyroid adenoma in an unusual cervical location, with emphasis on the importance of multimodal imaging.

Materials and Methods

A 42-year-old female patient presented with elevated serum calcium and PTH levels, consistent with primary hyperparathyroidism. She was on levothyroxine therapy, which led to non-visualization of the thyroid gland on Tc-99m pertechnetate scintigraphy. Tc-99m sestamibi scintigraphy revealed focal radiotracer retention with delayed washout in the upper left cervical region, distant from the thyroid gland. Neck ultrasound was inconclusive. Multislice CT (MSCT) demonstrated a well-defined, oval, homogeneously enhancing lesion in level III of the left carotid space. The lesion showed Type A contrast enhancement curve (arterial phase peak with venous washout), consistent with a hypervascular parathyroid adenoma.

Results

Based on the combination of functional and cross-sectional imaging findings, an ectopic parathyroid adenoma was strongly suspected. Surgical excision was performed. Histopathological analysis confirmed a parathyroid adenoma. Postoperative follow-up showed normalization of serum calcium and PTH levels, confirming treatment success.

Conclusion

This case demonstrates the diagnostic value of combining Tc-99m sestamibi scintigraphy with contrast-enhanced MSCT in identifying ectopic parathyroid adenomas, particularly when first-line ultrasound is inconclusive. Recognizing characteristic enhancement patterns, such as Type A curves, in atypical cervical locations is crucial for surgical planning and successful treatment.

INTERVENTIONAL RADIOLOGY

(415) - PP-101

A FIRST IN MEDICAL LITERATURE: HEMORRHAGE CONTROL WITH ARTERIAL EMBOLIZATION IN PRIMARY BREAST OSTEOSARCOMA

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Introduction

Hemorrhage is a rare but recognized complication during biopsy or surgery of breast masses, especially in aggressive mesenchymal tumors like osteosarcoma, which comprises less than 1% of primary breast cancers. Effective bleeding control significantly reduces morbidity and mortality. Transcatheter arterial embolization is a well-established method for hemorrhagic tumors in organs like the liver and kidney, but its use in breast cancer is rare, and to our knowledge, embolization in primary breast osteosarcoma has not been previously reported.

Purpose

We aim to present a rare case of primary breast osteosarcoma in which transcatheter arterial embolization was successfully used to control hemorrhage and enable surgical resection. Additionally, we aim to highlight the MRI findings and interventional images, representing the first documented case of arterial embolization in this rare tumor type.

Materials and Methods

A 33-year-old female patient presented with a palpable mass in the right breast. Breast ultrasound classified the lesion as BI-RADS 4. Tru-cut and excisional biopsies were both unsuccessful due to hemorrhage. Breast MRI revealed an 8×6 cm mass with contrast-enhancing septations, T2 hyperintensities reflecting hemorrhage stages, diffusion restriction, and tumor-related edema with skin thickening. To manage the bleeding, transcatheter arterial coil embolization was performed targeting tumor-feeding branches of the internal mammary and axillary arteries.

Results

Following successful embolization, the patient underwent mastectomy without complications. Histopathological examination confirmed the diagnosis of primary breast osteosarcoma. No further bleeding occurred postoperatively.

Conclusion

Arterial embolization is a life-saving, surgery-enabling intervention in hemorrhagic breast tumors when conventional treatments fail. It stabilizes patients, facilitates surgery, and may improve both prognosis and quality of life, particularly in aggressive tumors such as primary breast osteosarcoma.

(493) - PP-102

SELECTIVE EMBOLIZATION OF RENAL ANGIOMYOLIPOMAS: SINGLE CENTER EXPERIENCE

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Introduction

Angiomyolipomas (AMLs) are benign renal tumors, comprising about 1% of all renal neoplasms. They most often occur sporadically in women and, less commonly, in association with tuberous sclerosis (TS). While frequently asymptomatic, AMLs can present with pain, hematuria, or hemorrhage. Diagnosis is typically made through CT or MRI. Management depends on TS association, tumor size (>4 cm), and the presence of symptoms. Treatment options include surgical resection, embolization, ablation, and mTOR inhibitors. Embolization is mainly indicated in cases of bleeding, aneurysm formation, or significant symptoms.

Purpose

This study aims to assess the indications for AML embolization, as well as its safety and effectiveness.

Materials and Methods

From January 2023 to June 2025, a total of 19 embolizations were performed for symptomatic AMLs in the Interventional Radiology Unit of our hospital.

Results

All 19 patients were successfully treated with embolization after superselective catheterization of the arterial branches supplying the lesion. One patient required a second session due to an early-branching renal artery. Various embolic materials were utilized, with no clear preference for any single type. Ten patients experienced post-embolization syndrome (fever, abdominal pain, leukocytosis), all resolving within 24 hours. The remaining patients reported mild discomfort managed with common analgesics. Postoperative hospitalization was brief for all patients, who were advised to undergo imaging follow-up at 3 and 6 months.

Conclusion

AML embolization is a safe, minimally invasive approach that serves as an effective alternative to surgery, particularly in cases involving acute hemorrhage. Literature reports over 96% efficacy, preservation of normal renal tissue, short hospital stays, and typically mild post-embolization syndrome, with rare vascular injury or infarction. Personalized treatment planning is therefore recommended.

(461) - PP-103

THE ANATOMY OF A BLEED: CRACKING THE CODE OF HEMOPTYSIS THROUGH SELECTIVE BRONCHIAL ARTERY EMBOLIZATION

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Introduction

Massive hemoptysis is a serious condition requiring thorough investigation and prompt management. Aetiologies vary including broad inflammatory, neoplastic, and vascular causes. The bronchial circulation is responsible in most cases while a smaller percentage is related to the pulmonary circulation and to the aorta. Understanding the origin and branching of bronchial arteries is crucial for the diagnostic and therapeutic team to develop an effective treatment plan.

Purpose

Hemoptysis is a significant clinical issue potentially leading to life-threatening conditions, especially when massive and uncontrolled. Considering its wide spectrum of underlying causes and the occurrence of anatomical variations and nonbronchial systemic collaterals, this study aims to highlight the importance of accurate anatomical identification, precise assessment and effective management of bleeding, while addressing the associated challenges.

Materials and Methods

Bronchial artery embolization (BAE) has become the preferred method for managing persistent hemoptysis, with high success rates. Between August 2022 and May 2025, in the Interventional Radiology Department of General Hospital of Athens “Evaggelismos”, 64 bronchial artery embolizations were performed in patients with persistent hemoptysis, including intricate cases with various causes and anatomical variations. In all patients, a CT Angiography (CTA) of the bronchial arteries had preceded, which had identified alveolar hemorrhage or development of bronchial arteries. Complications arising from embolization typically relate to the angiographic process itself, while underlying patient’s conditions or varied anatomy comprises additional management obstacles.

Results

In most patients, the control of hemoptysis was successful after the first embolization attempt, while few patients required a second embolization due to recurrent hemoptysis. Postoperative complications were limited, as for instance lower limb hypesthesia.

Conclusion

Bronchial artery embolization could be the minimally invasive method of choice for addressing the frequently complex underlying causes of hemoptysis and its recurrence. It effectively navigates anatomical challenges, achieving a high rate of immediate clinical success with a low occurrence of complications.

(398) - PP-104

COMPREHENSIVE, CONTRAST-ENHANCED ULTRASONOGRAPHIC IMAGING OF PROSTATIC ARTERY EMBOLIZATION. A PICTORIAL REVIEW

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Introduction

The evaluation of prostatic perfusion before, during and after prostatic artery embolization (PAE) is important for treatment planning, for the evaluation of treatment efficacy and for prognosis. Contrast-enhanced ultrasonography (CEUS) is a flexible, safe and affordable modality that can be used for these purposes.

Purpose

To demonstrate representative CEUS findings before, during and after PAE and to describe their clinical relevance.

Materials and Methods

Both transabdominal and transrectal scanning with the standard intravenous (iv) route of administration of the echo-enhancer can be applied for CEUS before and after PAE. For CEUS study during PAE, not only iv, but also intraarterial (ia) injection of echo-enhancer can be applied.

Results

A CEUS study prior to PAE serves as a reference and provides an impression of the vascularity and of the extent of prostatic adenomas. This is of prognostic significance, since prostates with large and hypervascular adenomas tend to respond better to PAE than less well vascularized prostates with smaller adenomatous element. During the procedure, iv-CEUS is a valuable tool for on-site evaluation of the embolic effect. In case of inadequate prostatic infarction despite apparent angiographic occlusion of PA, a repeat angiography and a search for additional feeders should be considered. On the other hand, intraprocedural ia-CEUS can be performed with injection of diluted echo enhancer through the microcatheter, to confirm that a selected artery actually feeds the prostate. CEUS can also be applied during follow up post PAE, to demonstrate non-enhancing prostatic infarcts. The volume of prostatic infarcts can be calculated and compared to prostatic volume. Prostatic infarcts are a good early predictor of prostate shrinkage and correlate, at least partially, with clinical success.

Conclusion

CEUS findings before, during and after PAE have clinical and prognostic value and could provide insight into the therapeutic mechanisms of this procedure.

(472) - PP-105

BEHIND THE SCENES OF AVS: INSIGHTS FROM AN IR UNIT'S JOURNEY

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Introduction

Adrenal Vein Sampling (AVS) is the gold standard for subtyping primary aldosteronism (PA), but its technical complexity hinder consistent success. Our study shares the experience of a single Interventional Radiology (IR) unit, focusing on procedural evolution, outcomes, and key challenges.

Purpose

The purpose of this poster is to analyze AVS success rates, asses lateralization outcomes and complications over time and identify strategies to optimize the procedure.

Materials and Methods

Retrospective review of approximately 10 cases per year AVS procedures (2012–2025) at Evangelismos General Hospital, Athens Greece. Bilateral sequential adrenal vein catheterization was attempted, with cosyntropin stimulation. Selectivity (SI $\geq$ 5) defined technical success. Data included lateralization rates, complications, and protocol adjustments.

Results

Technical success improved from 70% (2012–2015) to 85% (2020–2025), achieving almost 80% overall. Right adrenal vein cannulation was more challenging (success 75% vs. left 100%), with variant anatomy contributing to 10% of failures. No major complications were observed and access-site issues were less than 5%.

Conclusion

AVS in IR demands adaptive techniques and continuous protocol refinement. Operator experience and detailed evaluation of adrenal vein anatomy using multidetector CT, along with selecting an appropriately shaped catheter were critical to improving success. These findings offer a roadmap for emerging programs to navigate technical barriers and maximize diagnostic accuracy.

(449) - PP-106
LOOK TWICE BEFORE REJECTING A PATIENT FOR FNB

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Introduction
FNBs of the organs like liver or adrenal glands usually are feasible and doesn't cause any problem to obtain a tissue from pathological region. However, sometimes the topography of the inner organs make it seem very difficult or even impossible, especially if your hospital can't provide you a navigation system.

Purpose
CT – guided FNB with coaxial system.

Materials and Methods
Two patients were evaluated for biopsy procedure. Patient 1: small peripheral focal lesion at the left liver lobe. Transverse bowel was totally occupying the front space, so the only access point was a small window from the left abdominal wall between the intestinal loops. Patient 2: right adrenal gland metastatic lesion with high anatomical position, mostly surrounded by lung tissue on CT axial projection. The only feasible access was through the right abdominal wall avoiding liver and kidney injury. Both procedures were accomplished with coaxial core needle biopsy system. The manipulation of the inner stylet in and out of the blunt cannula offered the safety avoiding surrounding organs injury and successful tissue gathering with the semi - automatic biopsy needle.

Results
Placing the patient in supine position permits the access to the lateral abdominal wall, using the technique of free breathing easily tolerated by any patient. After marking the point of entrance local anesthesia is the key for good cooperation of the patient. As soon as the peritoneal wall is penetrated the stylet is removed and the outer cannula is advanced towards the lesion, simultaneous saline injection may be helpful. This technique allows to avoid the bowel since it is a moving organ and prevent major complications.

Conclusion
The knowledge of the anatomy, right positioning and cooperation of the patient as well as the appropriate instrumentarium is mandatory for successful percutaneous biopsy performance.

(408) - PP-107

OUR EXPERIENCE AT THE INTERVENTIONAL NEURORADIOLOGY UNIT OF THE UNIVERSITY GENERAL HOSPITAL OF LARISSA IN THE ENDOVASCULAR TREATMENT OF RUPTURED AND UNRUPTURED CEREBRAL ANEURYSMS USING INTRASACCULAR DEVICES

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Introduction

Endovascular treatment of cerebral aneurysms is continuously evolving, with novel technologies such as intrasaccular flow disruptors providing a safe and effective therapeutic alternative.

Purpose

To present our experience at the Interventional Neuroradiology Unit of the University General Hospital of Larissa in the use of Woven EndoBridge (WEB), Artisse, and Contour devices for the treatment of cerebral aneurysms.

Materials and Methods

We retrospectively analyzed patients treated endovascularly between 2023 and 2025 using these devices. Aneurysm characteristics (size, anatomy, rupture status), technical success, and procedure-related complications were assessed.

Results

A total of 20 aneurysms were treated (16 unruptured, 4 ruptured). The technical success rate was 100%, with an overall perioperative complication rate of 10% (thrombus formation managed pharmacologically in 2 of the 4 ruptured aneurysms). No permanent neurological deficits were observed. Complete aneurysm occlusion was achieved. The follow-up period ranged from 3 to 24 months, with satisfactory occlusion documented in 85% of cases.

Conclusion

The use of WEB, Artisse, and Contour devices appears to be a safe and effective option for the endovascular treatment of cerebral aneurysms, demonstrating high occlusion rates and low complication rates. Our experience supports their broader application, depending on the location and morphology of the aneurysms.

(416) - PP-108

A RARE CASE: DETECTION OF MALIGNANCY DURING FOLLOW-UP AFTER MICROWAVE ABLATION OF A BENIGN THYROID NODULE

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Introduction

Due to the potential complications associated with surgery and radioactive iodine therapy, minimally invasive techniques such as radiofrequency ablation (RFA) and microwave ablation (MWA) are increasingly favored in the treatment of thyroid nodules. In countries such as Italy, Korea, and China, RFA has been adopted as a first-line treatment for selected nodules. According to current guidelines, RFA/MWA is indicated particularly for symptomatic benign nodules or autonomously functioning nodules in patients who either refuse or are unfit for surgery. In non-metastatic multifocal papillary thyroid carcinoma, long-term outcomes of RFA/MWA have been found to be comparable to surgery, with significantly fewer complications. Reported recurrence rates following RFA/MWA in primary thyroid malignancies range between 8.1% and 13.3%. However, detecting malignancy shortly after MWA of a cytologically benign nodule is rare in the literature.

Purpose

To present a rare case of papillary microcarcinoma diagnosed shortly after MWA performed on a thyroid nodule initially reported as benign on fine-needle aspiration biopsy (FNAB).

Materials and Methods

A 38-year-old euthyroid woman presented with neck swelling and nighttime dyspnea. Ultrasound revealed multiple solid nodules, the largest measuring 40×35 mm. FNAB reported benign cytology. Due to compressive symptoms and refusal of surgery, the patient underwent ultrasound-guided percutaneous MWA. One-month follow-up revealed approximately 50% reduction in nodule volume, and the patient was discharged with routine follow-up.

Results

At the 6-month follow-up, increased size and vascularity in the nodule raised suspicion. FNAB of a cervical lymph node was benign. Hemithyroidectomy revealed classic-type papillary microcarcinoma and lymphocytic thyroiditis. A total thyroidectomy was performed. No residual or recurrent disease was detected during follow-up.

Conclusion

MWA is a safe and effective treatment option for selected thyroid nodules. However, malignancy may still arise even in cytologically benign nodules. This case is one of the first in the literature reporting papillary microcarcinoma shortly after MWA, emphasizing the importance of post-procedural surveillance.

(455) - PP-109

PERIPHERALLY INSERTED CENTRAL CATHETERS BY RADIOLOGIC RESIDENTS: A SINGLE TERTIARY HOSPITAL EXPERIENCE

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Introduction

Peripherally inserted central catheters (PICCs) are integral to modern oncologic care, providing long-term vascular access for chemotherapy, supportive therapies, and infection management.

Purpose

This study aimed to evaluate the clinical profile, complication rates, and usage trends of PICCs inserted by radiologic residents in adult cancer patients over a ten-year period at a single tertiary hospital.

Materials and Methods

A retrospective review was conducted of all adult patients (≥18 years) with malignancies who received at least one PICC from January 1, 2013, to December 31, 2024. Data on patient demographics, malignancy type, procedural details, and complications (immediate and late) were collected. PICC placement was performed under combined ultrasound and fluoroscopic guidance by consecutive radiologic residents. Primary endpoints included technical success rate, incidence of immediate and late complications, and overall device survival.

Results

A total of 841 patients (467 males, 374 females; mean age 62.1 years) met the inclusion criteria. PICCs were primarily used for chemotherapy (n=483). The technical success rate was 99.9%, with primary success achieved in 98.4% of placements. Immediate complications were rare (2.3%), comprising minor bleeding, thrombosis, and material malfunctions. Late complications occurred in 21.3% of cases, most frequently bloodstream infections (9.5%) and thrombosis/occlusion (4.9%). Despite these events, 83.7% of patients required only one PICC throughout therapy. Usage peaked between 2019 and 2022, coinciding with institutional efforts to reduce repeated peripheral venipuncture during the COVID-19 pandemic.

Conclusion

Over ten years, PICC placement by radiologic residents proved safe and highly successful in an oncology population. Although late complications-particularly bloodstream infections and thrombosis-remained significant, targeted preventive measures and consistent follow-up can enhance line longevity and reduce morbidity. The findings underscore the value of a dedicated vascular access program and highlight evolving PICC usage trends, especially during public health challenges such as the COVID-19 pandemic.

(495) - PP-110

TRANSJUGULAR LIVER BIOPSY IN HAEMATOLOGIC PATIENTS WITH LIVER DYSFUNCTION: SINGLE CENTER EXPERIENCE

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Introduction

Liver injury is a common complication among hematologic patients and can progress to liver failure, which is associated with high mortality. Histological identification of liver damage through biopsy is critical for appropriate clinical management. However, coagulation disorders, such as thrombocytopenia, are major contraindications for percutaneous liver biopsy due to the elevated risk of bleeding.

Purpose

This study aims to highlight the safety and efficacy of transjugular liver biopsy in haematology patients with coagulation disorders, ascites, acute liver failure or liver transplant. It also seeks to evaluate its clinical importance in the management of hematologic patients.

Materials and Methods

Between January 2023 and August 2025, a total of 21 transjugular liver biopsies were performed in hematologic patients with liver damage at the Interventional Radiology Department of our hospital. All procedures were performed using ultrasound-guided jugular vein access followed by fluoroscopic-guided biopsy.

Results

All 21 transjugular liver biopsies were successfully completed without major complications. Three patients experienced localized pain at the puncture site, which resolved without further intervention. Histopathological analysis of biopsy tissued revealed a range of results, such as hepatic fibrosis, inflammation and thromboembolic disease.

Conclusion

Transjugular liver biopsy is a safe and effective method for obtaining liver tissue in hematologic patients with liver dysfunction, particularly those with coagulation abnormalities, as jugular access significantly reduces the risk of bleeding. These findings emphasize the method’s value in guiding the clinical management of this high-risk patient population.

(317) - PP-111

EFFICACY OF RADIOPAQUE GELIFIED ETHANOL FOR LUMBAR DISC HERNIATION-CASE REPORT:

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Introduction

Lumbar disc herniation (LDH) commonly causes low back pain and radicular symptoms. While conservative treatment is often effective, persistent cases may require intervention. Minimally invasive techniques, such as percutaneous radiopaque gelified ethanol injection offer an alternative to surgery.

Purpose

To report the clinical and radiological outcomes of radiopaque gelified ethanol injection in a patient with symptomatic LDH refractory to conservative therapy.

Materials and Methods

A 42-year-old male presented with a 6-month history of left-sided sciatica, numbness, and weakness, unresponsive to physiotherapy, NSAIDs, and epidural steroid injections. Neurological examination showed reduced left ankle reflex and mild dorsiflexion weakness (MRC 4/5). Straight leg raise was positive at 45 degrees. MRI revealed a right paracentral L5-S1 disc herniation irritating the right S1 nerve root.Under fluoroscopic guidance, a 18G needle was advanced into the L5-S1 disc. After confirming correct placement, 0.8 mL of gelified ethanol was slowly injected. Fluoroscopy verified even distribution without leakage.

Results

The patient reported marked pain relief within 48 hours. At month follow-up, the Visual Analogue Scale (VAS) score decreased from 8/10 to 2/10. Neurological examination normalized, and the patient resumed daily activities. After two mounts MRI showed significant shrinkage of the herniation with resolution of nerve compression. No complications were observed.

Conclusion

Radiopaque gelified ethanol injection provided rapid and sustained symptom relief in this case of contained LDH. This minimally invasive technique appears safe and effective, offering an attractive alternative to surgery for carefully selected patients.

(456) - PP-112

CLINICAL OUTCOMES OF BILIARY DRAINAGE IN PATIENTS WITH MALIGNANT BILIARY OBSTRUCTION CAUSED BY PRIMARY AND METASTATIC HEPATOBILIARY CANCER

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Introduction

Malignant biliary obstruction is a potential complication of primary and metastatic hepatobiliary cancer that is challenging to solve. Biliary drainage can be performed to relieve symptoms of jaundice, treat septic cholangitis and enable further palliative systemic chemotherapy.

Purpose

The aim of this study is to evaluate clinical outcomes, complication rates, and usage trends of biliary drainage in malignant biliary obstruction over a ten-year period at a single tertiary hospital.

Materials and Methods

Over a ten - year period (2013-2025), 66 consecutive patients with malignant biliary obstruction due to hepatobiliary cancer who underwent an unsuccesfull endoscopic retrograde cholangiopancreatography were referred for percutaneous drainage and were included in the study. Patient demographics, disease type, and procedural characteristics and outcomes were retrospectively collected from electronic medical records. Radiological data were reassessed and functional and technical success was calculated.

Results

Primary pancreatic and biliary malignancies had the higher prevalence amongst patients with malignant biliary obstruction (72.7%). The remaining metastatic cancer types included gastric Ca in 12.1%, breast Ca in 7.6% and colon Ca 6.1%. The technical success rate for biliary drainage was 98.5% (65/66). No major complications were recorded. Minor complications such as immediate haemobilia and acute elevations of the amylase and lipase levels one day after drainage was seen in 61 patients. The bilirubin levels were significantly reduced in the following weeks after drainage in all patients (clinical success 100%). Biliary catheter diameters ranged from 8 to 10Fr. In-out drainage was used in 37.8%, dual drainage in 22.7% and self- expandable nitinol stents in 30.3% of the patients.

Conclusion

After failed endoscopic recanalization of the bile ducts, transhepatic biliary drainage proved to be an option with high technical success, a low complication rate and good clinical benefit in our patients with malignant bile duct obstruction.

(388) - PP-113

ENDOVASCULAR TREATMENT OF POST-TRAUMATIC ARTERIOVENOUS MALFORMATION IN THE FACIAL REGION: A CASE REPORT

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Introduction

Arteriovenous malformations are abnormal direct communications between arteries and veins, bypassing the normal capillary bed. Although typically congenital in origin, acquired AVMs following trauma have also been reported in the literature. In this case report, we present a patient who developed an AVM in the left zygomatic region two months after facial trauma and treated successfully with endovascular embolization.

Purpose

To report a rare case of post-traumatic facial AVM and highlight the importance of considering vascular anomalies in persistent post-traumatic facial swellings.

Materials and Methods

Initially, CT was performed. Tho months later, ultrasonography and digital subtraction angiography (DSA) identified an AVM supplied by branches of the facial and lingual arteries. Transarterial embolization was performed using NBCA via selective catheterization.

Results

A 21-year-old male patient presented to the emergency department with swelling in the left zygomatic region after sustaining a punch to the face. Initial facial computed tomography performed on the day of the trauma revealed no fractures; however, heterogeneity in the subcutaneous tissues was noted. The patient was initially managed conservatively. Due to persistent swelling, ultrasonography was performed two months later, revealing an AVM. The patient was referred to our interventional radiology clinic for further evaluation and treatment. Diagnostic DSA demonstrated an AVM supplied by branches of the lingual and facial arteries. Under sedoanalgesia, the AVM was treated with transarterial embolization using glue (NBCA). The procedure was successful with no immediate or delayed complications observed during 2-month follow-up.

Conclusion

In cases of persistent swelling following facial trauma, clinicians should maintain a suspicion for vascular anomalies such as AVMs. Early diagnosis and appropriate intervention, particularly through minimally invasive embolization techniques, can effectively prevent serious complications.

MUSCULOSKELETAL RADIOLOGY

(407) - PP-114
SYNOVIAL PLICAE OF THE KNEE – SHOULD YOU BE CONCERNED?

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Introduction
Synovial plicae of the knee represent embryonic remnants and are often encountered as normal findings on routine MRI studies. Simply visualizing the plica does not equal a clinical syndrome and one should take awareness not to overcall it as a pathological finding. There are however cases, where plicae may get irritated and cause pain or even cartilage injury. In such cases, recognizing the plica as the root cause for symptoms is crucial for initiating patient's treatment and preventing further joint damage.

Purpose
To illustrate the formation of the synovial plicae of the knee; To discuss imaging findings suggesting clinical significance of the plica; To present cases of synovial plicae causing clinical symptoms;

Materials and Methods
MRI is the method of choice for clearly delineating synovial plicae. While more prominent in some patients, most plicae do not cause clinical symptoms. Due to its ability to detect signs of irritation and delineate anatomical relations regarding nearby structures, MRI can suggest impingement or injury of the plica, therefore determining its clinical significance. We retrospectively analyzed images and clinical data of patients from our institution, and correlated imaging findings with patient's symptoms.

Results
Clinical relevance of plicae is controversial - simply the presence or prominence of a plica may not correlate with patient's symptoms. MRI is a helpful tool in suggesting clinical significance and may influence treatment tactics.

Conclusion
Synovial plicae of the knee are a common finding but are rarely responsible for symptoms. Irritation of the plica may lead to symptoms and present as plica syndrome. Characterizing the appearance of the plica and its relations to nearby structures using MRI, may suggest its clinical significance and provide better treatment outcome.

(509) - PP-118
FAT NECROSIS – EASY TO DIAGNOSE OR NOT SO MUCH?

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Introduction
Fat necrosis is relatively common and some often relatively easy to diagnose benign entity, frequently related to trauma. On the other hand the latter cane cause diagnostic dilemmas, like mimicking soft tissue masses, inflammation or malignancy.

Purpose
To illustrate the condition with different imaging findings on CT, MRI and US and its various locations. To discuss its imaging characteristics and differential diagnosis.

Materials and Methods
While having relatively known imaging characteristic within the breast on mammogram and ultrasound, other locations like abdomen, mediastinum, subcutaneous fat with different US and MRI appearances, can sometimes be challenging for the radiologist and clinician and even mimic malignancy.

Results
Due to the variety of location sites and radiological appearance, we present images from both incidental and some times clinically relevant findings to illustrate fat necrosis. Cases from breast US, mammogram and MRI we be shown, as well as abdominal, mediastinal and soft tissue fat necrosis.

Conclusion
A variety of fat necrosis are often encounter during imaging on different modalities. It can present as incidental finding or sent for evaluation of a soft tissue mass or even be a suspicious finding during oncologic follow up. We should be aware of the condition and always keep in mind in our differential diagnosis.

(377) - PP-121

IMAGING THE INVISIBLE THREAT: THE ROLE OF CT IN DIAGNOSING NECROTIZING SOFT TISSUE INFECTION FOLLOWING ENVENOMATION

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Introduction

Spider bites are typically benign but can rarely lead to serious complications Brown recluse spider venom may cause dermonecrosis Secondary bacterial infection can lead to necrotizing fasciitis and sepsis

Purpose

• Patient: 79, Female • History: Complained of leg pain and swelling 48 hours post suspected spider bite • Symptoms: High fever, hypotension, altered sensorium • Local findings: Necrotic lesion on thigh •24 hours later, the patient reported pain in the ankle region • Laboratory Results: - WBC: 22.200 K/μL - CRP: 287 mg/L - Creatinine: 0.7 mg/dL • Initial impression: Severe soft tissue infection with systemic involvement The purpose was to rule out necotizing soft tissue infection

Materials and Methods

CT Scan: Axial and coronal views of the ankle foot before and post administration of intravenous contrast agent

Results

• Findings: - Fascial thickening and fluid tracking along fascial planes - Gas formation in soft tissues (suggestive of necrotizing fasciitis) - Deep muscular involvement without bone erosion • Findings during debridement: - Necrosis of fascia and subcutaneous tissue - Devitalized muscle

Conclusion

• Radiological evaluation was critical for diagnosis • Fasciitis may mimic cellulitis or abscess early on • Brown recluse bites can act as a trigger for aggressive soft tissue infection • Highlights the importance of CT imaging in suspected necrotizing infections - Classic radiologic triad: fascial thickening, gas, fluid collections - Importance of contrast-enhanced CT for early detection - Correlation with clinical and laboratory findings crucial for early diagnosis

NEURORADIOLOGY

(399) - PP-124
PITUITARY MRI IN PATIENTS WITH PRIMARY SJOGREN SYNDROME

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Introduction
Hypofunction of the hypothalamo-pituitary-adrenal (HPA) axis has been described in patients with Primary Sjogren syndrome (pSS). Although MRI offers structural and functional information on the hypothalamo-hypophyseal (HH) axis, imaging studies on pSS are lacking.

Purpose
To evaluate with MRI the HH axis in patients with pSS and to investigate for any possible morphological and microstructural abnormality that might be related with the dysfunction of HPA.

Materials and Methods
Twenty-two post-menopausal female pSS patients and 17 healthy controls were enrolled in the study. Pituitary gland height (PGH) was assessed using sagittal T1-weighted images, while microstructural changes were evaluated with diffusion tensor imaging (DTI) and microvascularization was assessed using T1-weighted dynamic contrast-enhanced imaging.

Results
Patients and controls did not differ significantly in age (patients: 67.2 $\pm$ 7.1 years; controls: 63.6 $\pm$ 5.1 years; p = 0.092). The average disease duration in patients was 11.5 $\pm$ 6.7 years. Mean PGH was significantly lower in patients (3.6 $\pm$ 1.1 mm) compared to controls (4.4 $\pm$ 0.6 mm), (p = 0.004). No significant difference was observed in biochemical variables, except for cortisol levels, which were significantly lower in patients (8.9 $\pm$ 4.6 μg/dL) compared with controls (12.6 $\pm$ 4.7 μg/dL) (p = 0.040). No significant differences in DTI metrics were observed between patients and controls. Microvascularization of the HH axis demonstrated normal enhancement curves. In the patient group, stepwise multiple regression revealed a positive association between prolactin levels and PGH (B = 0.352 $\pm$ 0.118; p = 0.010; adjusted R^2 = 0.362).

Conclusion
A low PGH in patients with pSS reflects dysfunction of the HH axis. The low cortisol levels point to dysfunction of the HPA axis.

(348) - PP-125

LEMIERRE SYNDROME - A FORGOTTEN COMPLICATION OF ANAEROBE (ORO)PHARINGEAL INFECTION

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Introduction

Lemierre syndrome is a pathological enthity, which occurs mainly in the younger population, as a rare complication of (oro)pharingitis or tonsilitis caused by anaerobe bacteria. The syndrome itself includes jugular vein thrombosis, accompanied by distal spread of the inflamation in the form of septic lung emboly, septic arthritis, intracranial microabsceses and dural sinus thrombosis.

Purpose

We present a case of a twelve year old male patient admited to the ER with unilateral neck swelling, following prior tonsilar infection, which was treated with broad spectre antibiotics. Fever and headaches were initialy reported.

Materials and Methods

Several imaging methodes were performed, including ultrasound of the neck, 128 slice CT of the head using IV contrast agent in means of CT angiography and MRI, using a 3T Ge scanner by the standard protocol, with added MRA, MRV and postcontrast T1w sequences.

Results

Ultrasound examination od the neck revealed multiple unilateral reactive lymphnodes with swelling of the left submandibular gland. Since persistent headaches were present, head CT was performed. No intraaxial lesions were found, but dural sinus thrombosis was suspected. The patient then underwent a head MRI scan which confirmed thrombosis of the left transversal sinus and sinus rectus, associated with the presence of supratentorial ring enchancing lesion – microabsceses, thus Lemierre syndrome was confirmed.

Conclusion

Modern imaging techniques like CT and MRI are an inseparable part od the diagnostic triade, together with microbiological and clinical findings. The above mentioned diagnostic modalities play a singifcant role in early detection of this entity, evaluation of the extent, and therapic effect. Intracranial spread of the infection can seldom cause unspecific symptomes. Early detection of Lemierre syndrome is of vital importance, since it can prevent brain parenhima damage

(363) - PP-128
MRI BASED INTERPRETATION OF THE DIFFERENT TYPES OF BRAIN INFARCTS

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Introduction
Brain infarcts are usually categorized according the affected vascular territory (OCSP classification) or their underlying etiology (TOAST classification). However, different types of infarcts present with distinctive imaging characteristics on MRI that may indicate the underlying mechanism of the infarct (embolism, atherosclerosis, hypoperfusion or other).

Purpose
1)To describe different types of ischemic strokes and their appearance on MRI with the help of illustrative cases 2)To analyze distinctive MRI features that aid in categorizing a brain infarct and understanding its etiology

Materials and Methods
The presentation includes both 3T and 1,5T MRI scans of patients with brain infarcts in order to discuss different infarct types and on occasion additional imaging (CT carotid angiograms).

Results
Acute ischemic strokes demonstrate hyperintense signal on T2 and FLAIR sequences, high DWI and low ADC signal and decreased cerebral blood flow on PWI sequences. Cortical territorial infarcts (embolism, atherosclerosis) appear as MRI signal abnormalities located in the cortex and subcortical white matter within a vascular territory. Striatocapsular (embolism, atherosclerosis) infarcts involve the putamen, caudate nucleus and anterior limb of internal capsule, resulting in a characteristic ‘comma’ shape on imaging. Superficial perforator infarcts (embolism), usually present as multiple small lesions located in the superficial centrum semiovale, with or without associated cortical lesions. Watershed infarcts are divided into cortical (hypoperfusion,microemboli) and deep (hypoperfusion) and they affect border areas between vascular territories, appearing as wedge - shaped areas or as a string of pearls pattern respectively. Branch atheromatous disease infarcts (atherosclerosis) are depicted as subcortical signal alterations with size > 15 mm, while lacunar infarcts (lipohyalinosis) are observed as small lesions (<15 mm) in the territory of the basal ganglia, thalami or brainstem.

Conclusion
Meticulous analysis of the spectrum of imaging patterns on MRI improves categorization of ischemic strokes and recognition of the underlying cause.

(531) - PP-131

APPLICATION OF NON-CONVENTIONAL MRI IN THE DIAGNOSIS OF PCSNL – A CASE REPORT

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Introduction

Space-occupying lesions of the central nervous system (CNS) often pose significant diagnostic challenges, that require thorough imaging evaluation using multiple advanced MRI techniques.

Purpose

The presentation of an interesting case of primary CNS lymphoma (PCNSL) diagnosed by multiparametric advanced MRI.

Materials and Methods

A 75-year-old patient was admitted to the Neurosurgery Department after initial imaging revealed an intraparenchymal brain lesion. Symptoms began a month earlier with numbness and weakness in the right lower limb, causing gait disturbances and progression of the weakness to the ipsilateral upper limb. On assessment, the patient was alert and oriented. Neurological examination revealed right-sided hemiparesis, prompting admission for further investigation and treatment.

Results

In a following new brain MRI, a solid, lobulated space-occupying lesion was demonstrated, extending into the cortex and subcortical white matter in the left frontoparietal region, adjacent to the interhemispheric fissure. Diffusion weighted imaging (DWI) and dynamic susceptibility contrast (DSC) perfusion revealed low diffusivity and increased cerebral blood volume at the solid enhancing part of the lesion, indicative of increased cellularity and vascularity respectively, while a central area of necrosis/degeneration, punctate microhemorrhagic foci and disproportionately extensive perifocal edema were also found with conventional MRI techniques. MR spectroscopy (MRS) demonstrates increased Choline and decreased NAA concentrations at the lesion's level, along with lipid accumulation within it. Imaging characteristics were indicative of a primary malignant neoplasm, with a strong likelihood of representing a primary lymphoma due to the characteristic appreciable amount of lipids. A biopsy of the lesion is subsequently performed, demonstrating findings consistent with diffuse B-cell lymphoma, without detectable primary neoplastic lesion in other systems, confirming the MRI report.

Conclusion

Thorough imaging, including advanced MRI techniques such as DWI, DSC perfusion and MRS, is crucial for the accurate characterization, differential diagnosis, and appropriate management of CNS tumors, such as PCNSL.

(530) - PP-133
DORSAL THORACIC ARACHNOID WEB - A RARE CASE REPORT

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Introduction
Dorsal arachnoid webs (DAWs) are rare intradural extramedullary lesions, typically located in the thoracic spine, that may cause progressive myelopathy. They represent thin membranous structures of arachnoid tissue compressing the dorsal surface of the spinal cord, often overlooked or misdiagnosed due to their subtle imaging characteristics.

Purpose
To present a rare case of DAW and discuss its characteristic imaging features and clinical relevance.

Materials and Methods
We report a case of a 76-year-old female who presented with non-specific neurological symptomatology with mild dorsal thoracic pain and paraesthesias involving the back and the lower extremities. Neurological examination revealed no abnormal findings. The electrophysiological evaluation did not reveal definitive signs of radiculopathy or established myelopathy. MRI of the thoracic spine was performed with additional intravenous administration of contrast agent.

Results
MRI revealed focal widening of posterior peripheral subarachnoid space at the level of the T7 vertebra with anterior displacement and angulation of the spinal cord at this level, forming the characteristic “scalpel sign”. A subtle increase of signal intensity intramedullary just above the angulation was observed. The findings were mostly consistent with a dorsal arachnoid web. The patient has not had surgery and is being monitored, as there is no clear clinical indication.

Conclusion
DAWs, although rare, should be considered in the differential diagnosis when spinal cord deformity is present, especially when MRI depicts the distinctive “scalpel sign.” Early diagnosis is crucial as surgical intervention can lead to significant neurological improvement in some cases. Radiologists should suspect it to avoid misdiagnosis or delay in treatment.

(552) - PP-135

BRAIN ATROPHY IN MULTIPLE SCLEROSIS PATIENTS: VISUAL ASSESSMENT AND CORRELATION WITH GENDER AND AGE

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Introduction

Brain atrophy in multiple sclerosis (MS) develops earlier than in the general population, involving both white and gray matter. Beyond monitoring lesion load, evaluating atrophic changes during follow-up imaging is essential for understanding disease progression.

Purpose

To assess the degree of brain atrophy in MS patients through visual semi-quantitative evaluation and analyze its correlation with patient age and gender.

Materials and Methods

The magnetic resonance images of 210 MS patients were retrospectively analyzed. Brain atrophy was assessed visually and categorized into four stages: no atrophy, mild, moderate, and severe. Patients were stratified by age, gender, and atrophy grade. Statistical analysis included the Mann-Whitney U test (to assess atrophy differences between genders), the Shapiro-Wilk test (to evaluate normality of age distribution), and Pearson's correlation coefficient (to analyze the relationship between age and atrophy severity).

Results

Among 210 patients, 59 exhibited no atrophy, 61 mild, 62 moderate, and 28 severe atrophy. Mean age increased progressively with higher atrophy stages, from 36.3 ± 10.9 years (no atrophy) to 50.2 ± 11.6 years (severe atrophy). A statistically significant difference was found between genders ($p=0.001$), with advanced atrophy more prevalent in male patients. The Pearson correlation analysis demonstrated a moderate positive correlation between age and atrophy severity ($r=0.35$, $p<0.01$). Shapiro-Wilk test confirmed normal age distribution within all atrophy groups.

Conclusion

Brain atrophy in MS patients correlates positively with increasing age and is significantly more advanced in males.

(450) - PP-136

SMART SYNDROME AFTER BRAIN TUMOR RADIATION THERAPY: A CASE REPORT

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Introduction

Stroke-like migraine attacks after radiation therapy (SMART) syndrome is a rare condition that can occur as a delayed complication of brain radiotherapy. It may develop several years after treatment, typically between 6 and 30 years following cranial irradiation. Clinically, it most commonly presents with migraine-like headaches, seizures, and/or stroke-like neurological deficits. Abnormalities on magnetic resonance imaging (MRI) may be visible at the onset of symptoms or may take several days to appear.

Purpose

To present a case of SMART syndrome and its radiological features on MRI.

Materials and Methods

A 47-year-old man underwent surgery 17 years ago for a right frontal lobe brain tumor (diffuse astrocytoma, grade II), followed by radiotherapy. Thirteen years after the initial treatment, additional radiotherapy was administered due to suspected tumor recurrence, followed by polychemotherapy. Four years later, the patient presented to the emergency department with multiple epileptic seizures over the previous two days, prompting an MRI scan.

Results

MRI revealed postoperative and postradiotherapy changes in the right frontal lobe, with interval thickening of the right frontal and insular cortex, diffusion restriction and postcontrast enhancement, findings suspicious for SMART syndrome. A follow-up MRI performed three months later showed resolution of these changes.

Conclusion

SMART syndrome is diagnostically challenging and must be differentiated from other conditions with similar radiological presentations, such as posterior reversible encephalopathy syndrome (PRES), postictal changes, meningoencephalitis, cerebrovascular disorders, and tumor recurrence. Early and accurate diagnosis is essential for appropriate management and for avoiding unnecessary aggressive treatments.

(475) - PP-137

MRI PATTERNS OF PERIVASCULAR ENHANCEMENT: A VISUAL GUIDE TO CNS DIFFERENTIAL DIAGNOSIS

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Introduction

Perivascular enhancement (PVE) on MRI is a radiological finding that may reflect a wide spectrum of central nervous system (CNS) pathologies. The differential diagnosis of PVE is broad, encompassing pathologies with radically different prognoses and management.

Purpose

Our work aims to provide practical guidance for clinicians and radiologists. Through a pictorial review, we present various pathologies that can manifest as PVE on CNS MRI, along with tips and tricks for effective differential diagnosis.

Materials and Methods

PVE is commonly associated with entities including demyelinating diseases, such as multiple sclerosis; inflammatory/immune-mediated processes like granulomatosis, MOGAD, GFAP, CLIPPERS/SLIPPERS; infectious agents, including tuberculosis and viral encephalitis or vasculitis. Moreover, PVE can signal the presence of neoplasms, such as intravascular lymphomas or metastatic disease, complicating the diagnostic landscape.

Results

The diversity of conditions presenting with PVE necessitates a thorough clinical evaluation. To differentiate these pathologies effectively, it often requires the integration of clinical history, laboratory results, and advanced imaging techniques. We present MRI patterns and satellite findings for each pathology to aid in the differential diagnosis. Moreover, we highlight potential pitfalls that can be misdiagnosed as PVE, emphasizing the need for caution and attention in clinical practice.

Conclusion

Given the rarity of PVE, clinicians and radiologists must be aware of it. Misinterpretation can lead to significant consequences, including delays in appropriate management or unnecessary interventions. A multidisciplinary approach and extensive study are, therefore, essential for optimal patient care. While PVE is a relatively uncommon MRI finding, it is an important marker for various CNS pathologies. Understanding its differential diagnoses is not just important, but vital for clinicians to ensure timely and accurate treatment, underscoring the urgency of their role in patient care.

ONCOLOGIC IMAGING

(324) - PP-139
DIAGNOSTIC APPROACH TO CHONDROBLASTOMA- MRI-AN INTERESTING CASE

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Introduction
Chondroblastoma is a benign, chondroid-producing neoplasm composed of chondroblasts. It accounts for less than 1% of all bone tumors and usually arises in the epiphyses or apophysis of skeletally immature patients. Proposed the term "chondroblastoma," noting the immature chondroid cells and poorly formed matrix. These neoplasms usually occur in the long bones and are important, considering both benign and malignant etiologies in the differential diagnosis. The proximal humerus is the most common site of involvement, followed by the distal femur and proximal femur. Chondroblastomas require surgical treatment. In general, chondroblastoma has a good prognosis, and patients often experience full resolution after surgical treatment.

Purpose
The evaluation of the utility of MRI in the diagnosis of bone tumors as well as the presentation of interesting cases that do not show no specific laboratory findings

Materials and Methods
Patient 20age , goung man comes to the emergency department, with pain that doesn't subside with rest and does not subside with analgesics, joint stiffness, limp. The patient do not report an injury.

Results
in our case the histological type was : multinucleated osteoclast-type giant cells scattered multinucleated osteoclast-type giant cells are almost uniformly present among the chondroblasts.

Conclusion
The diagnostic value of MRI in the early management of patients. Treatment is usually intralesional resection- dipends from location and his volume side local adjuvant therapy (i.e. cryoablation), +/- bone graft (usually by the patient himself from the pelvic bone).

(458) - PP-140

SOLITARY LIVER MESTASTASIS FROM SQUAMOUS CELL CANCER OF THE UTERINE CERVIX

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Introduction

Liver is one of the most common sites for metastatic dissemination of epithelial tumors, however liver metastases of the cervical cancer are rare, accounting for 2-5%, especially are rare in the absence of the other sites of tumor spread, and more often encountered in adenocarcinoma.

Purpose

Distant metastases of cervical cancer besides non-squamous histology are also more often in advanced stage and higher grade and result in a poor prognosis.

Materials and Methods

A 56-year-old woman with biopsy proven moderately differentiated (grade 2) squamous cell cancer initially presenting in FIGO III stage due to the left-sided hydronephrosis, without visible pelvic or para-aortic lymph node enlargement and distant metastases on abdominal and pelvic MRI, underwent neoadjuvant chemotherapy with poor response of mild reduction in tumor size, without reduction in tumor stage.

Results

Complete clinical and radiological response was detected four months after completed combined radiation therapy, however follow-up MRI showed local recurrence and new 21mm lesion in S6 of the liver 14 months after treatment. The liver lesion was hypovascular with restriction of the diffusion, and in addition showed high 18-fluordeoxyglucose (FDG) uptake on PET/CT with SUVmax 12,43. Subsequent metastasectomy confirmed metastatic moderately differentiated HPV-associated squamous cell cancer of the uterine cervix showing positive PD-L1 expression. Systemic chemo/immunotherapy showed partial response of the recurrent tumor on interim MRI, with no recurrence in liver and no distant metastases, and the patient improved clinically.

Conclusion

In spite of rare occurrence and poor prognosis in metastatic cervical cancer, imaging plays an important role in diagnostic algorithm to enable tailored treatment with prolonged survival and improved quality of life.

(256) - PP-141

IMAGING SIDE EFFECTS AND COMPLICATIONS OF ANTINEOPLASTIC THERAPY IN GASTROINTESTINAL TRACT- A PICTORIAL REVIEW.

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Introduction

Antineoplastic treatment can affect all organs and types of tissues.Complication may appear acute or after prolonged treatment as a result of stochastic effects. Recognizing the side effects can have a big impact in the treatment itself but also save the patient's life, certain conditions can be life threatening (for example, pneumonitis, infections, sinusoidal obstructive syndrome, etc.).Cancer Treatment it includes Surgery, Chemotherapy, Radiation Therapy, Targeted Therapy, Immunotherapy, Stem Cell or Bone Marrow Transplant and Hormone Therapy.

Purpose

to visualize complication of antineoplastic treatment.

Materials and Methods

Reading CT and MRI scan performed on cancer patients during the protocols therapy or in emergency room in comparison to published reports. Cooperation with the clinical data provided from oncologists .

Results

-Cancer treatments induce local and systemic changes on normal tissues, both on short and long term. -during treatment complications can appear to be related to treatment but also cross-complications, often cancer patients have concomitant diseases

Conclusion

-imaging assessment of tumor response is adapting to atypical responses ,expected changes and complications of chemo/radiotherapy are still routinely encountered in post-treatment imaging examinations. -radiology is a dynamic speciality contributing to a better treatment in cancer patients -fast and highly performing CT and MRI technologies have opened new frontiers in oncology imaging, allowing tissue characterization, early diagnosis, prognostic evaluation, and accurate response assessment. -the new era with AI breach the borders to understand, caracterisation and differentiating the complications from pseudoprogession or treatment respons , but until everything will be able to be interpretated by machines and AI , classically studies and readings of CT and MRI are required in every branch of radiology.

(255) - PP-142
IMAGING ORGAN RELATED SIDE EFFECTS IN IMMUNE THERAPY

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Introduction
Antineoplastic treatment can affect all organs and types of tissues.Complication may appear acute or after prolonged treatment as a result of stochastic effects. Recognizing the side effects can have a big impact in the treatment itself but also save the patient's life, certain conditions can be life threatening (for example, pneumonitis, infections, sinusoidal obstructive syndrome, etc.).Focus on immunotherapy .

Purpose
to visualize complication of antineoplastic treatment.

Materials and Methods
Reading CT and MRI scan performed on cancer patients during the protocols therapy or in emergency room in comparison to published reports. Cooperation with the clinical data provided from oncologists

Results
-Cancer treatments induce local and systemic changes on normal tissues, both on short and long term. -during treatment complications can appear to be related to treatment but also cross-complications, often cancer patients have concomitant diseases

Conclusion
-imaging assessment of tumor response is adapting to atypical responses ,expected changes and complications of chemo/radiotherapy are still routinely encountered in post-treatment imaging examinations. -radiology is a dynamic speciality contributing to a better treatment in cancer patients -fast and highly performing CT and MRI technologies have opened new frontiers in oncology imaging, allowing tissue characterization, early diagnosis, prognostic evaluation, and accurate response assessment. -the new era with AI breach the borders to understand, caracterisation and differentiating the complications from pseudoprogession or treatment respons , but until everything will be able to be interpretated by machines and AI , classically studies and readings of CT and MRI are required in every branch of radiology.

(254) - PP-143
EMERGENCIES IN ONCORADIOLOGY

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Introduction
Antineoplastic treatment can affect all organs and types of tissues.Complication may appear acute or after prolonged treatment as a result of stochastic effects. Recognizing the side effects can have a big impact in the treatment itself but also save the patient's life, certain conditions can be life threatening (for example, pneumonitis, infections, sinusoidal obstructive syndrome, etc.).

Purpose
to visualize emergencies related to antineoplastic treatment

Materials and Methods
Reading CT and MRI scan performed on cancer patients during the protocols therapy or in emergency room in comparison to published reports. Cooperation with the clinical data provided from oncologists .

Results
-Cancer treatments induce local and systemic changes on normal tissues, both on short and long term. -during treatment complications can appear to be related to treatment but also cross-complications, often cancer patients have concomitant diseases

Conclusion
-imaging assessment of tumor response is adapting to atypical responses ,expected changes and complications of chemo/radiotherapy are still routinely encountered in post-treatment imaging examinations. -radiology is a dynamic speciality contributing to a better treatment in cancer patients -fast and highly performing CT and MRI technologies have opened new frontiers in oncology imaging, allowing tissue characterization, early diagnosis, prognostic evaluation, and accurate response assessment. -the new era with AI breach the borders to understand, caracterisation and differentiating the complications from pseudoprogession or treatment respons , but until everything will be able to be interpretated by machines and AI , classically studies and readings of CT and MRI are required in every branch of radiology.

(454) - PP-144

EXTRAHEPATIC HCC: METASTATIC DISEASE OR PRIMARY CANCER

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Introduction

Hepatocellular carcinoma is among the most common primary liver cancers and represents the 2nd cause of cancer-related mortality worldwide. Most patients are asymptomatic at diagnosis, or present with symptoms attributable to underlying liver pathology, most often cirrhosis. Metastatic disease is usually associated with advanced tumors (> 5 cm) and most frequently involves lungs, lymph nodes, bones, and adrenal glands. Extrahepatic HCC is extremely rare condition with potential locations such as the pancreas, gallbladder, portocaval lymph nodes, retroperitoneum or chest wall. Only about 30 cases reported in the literature according to recent data from the World Journal of Gastrointestinal Oncology (2024).

Purpose

The aim of this presentation is to highlight the rare occurrence of HCC as extrahepatic disease without any detectable liver pathology. Although the ectopic liver tissue may undergo malignant transformation, it has better prognosis compared to typical HCC.

Materials and Methods

Diagnosis of ectopic HCC relies on the absence of primary liver lesions, confirmed by comprehensive imaging modalities including ultrasound, CT, MRI, and PET-CT, alongside a positive α-FP marker. Biopsy of the suspicious lesion is essential to determine the hepatic origin of the tumor cells and to distinguish primary ectopic HCC from metastatic disease. The presence of liver cells within the lesion, combined with the lack of detectable liver pathology, supports the diagnosis of ectopic HCC.

Results

The prognosis for typical HCC with metastases is poor, with a median survival of 7–15 months. In contrast, patients with ectopic HCC who undergo surgical excision or local ablation generally have a better prognosis, which is attributed to the poor vascularization of the ectopic tissue and the potential for complete removal. Normalization of α-FP levels following therapy further supports the diagnosis and successful treatment of ectopic HCC.

Conclusion

Postoperative oncological surveillance should follow the established guidelines for localized HCC, aiming to maximize patient survival and quality of life.

(339) - PP-145

PELVIC SWANNOMA IN THE RIGHT PARAMETRIUM - RADIOLOGIC PATHOLOGIC CORRELATION

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Introduction

Neurilemomas, or schwannomas, are benign encapsulated tumors derived from Schwann cells. They commonly occur in cranial nerves, especially as acoustic neurinomas. Schwannomas in the pelvis and retroperitoneal areas are extremely rare, comprising less than 0.5% of cases, unless associated with neurofibromatosis type 1.

Purpose

This report presents the first documented case of a pelvic schwannoma located in the right parametrium, aiming to highlight its rarity and discuss management strategies.

Materials and Methods

A 58-year-old female was diagnosed with a 6.5 × 5.5 cm pelvic mass in the right parametrium. Due to the tumor's rarity and uncertain malignant potential, laparotomy with total abdominal hysterectomy and en-bloc tumor excision was performed. An intraoperative frozen section was conducted but yielded ambiguous results. Complete excision was carried out with pelvic blunt dissection to ensure thorough removal.

Results

Histological analysis confirmed a benign schwannoma originating from peripheral nerve sheath cells. Degenerative changes were noted, including cystic degeneration, hemorrhagic infiltrations, ischemic foci with pycnotic cells, and collagen replacement. No malignant features were identified.

Conclusion

Pelvic schwannomas are rare and may be misdiagnosed preoperatively. Surgical excision remains the treatment of choice. While laparotomy was performed in this case, laparoscopy can be a safe and effective alternative, providing enhanced visualization in the confined pelvic space. Awareness of this rare entity is essential for appropriate diagnosis and management.

(487) - PP-146

CAN IGG4-RELATED AUTOIMMUNE PANCREATITIS MIMIC PANCREATIC DUCTAL ADENOCARCINOMA? A CHALLENGING CASE

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Introduction

IgG4-related autoimmune pancreatitis (AIP) is a rare fibroinflammatory condition that may closely mimic pancreatic ductal adenocarcinoma (PDAC) both clinically and radiologically, often leading to unnecessary surgery [1]. Differentiating autoimmune pancreatitis from malignancy remains a diagnostic challenge [2].

Purpose

To present a case of IgG4-related autoimmune pancreatitis that closely mimicked pancreatic ductal adenocarcinoma on imaging, leading to a Whipple procedure, and to emphasize the need for awareness of this entity in the differential diagnosis of pancreatic head masses [3].

Materials and Methods

A 78-year-old male with a history of smoking and cholelithiasis presented to the emergency department with progressive fatigue, weight loss, and jaundice. The patient had received antibiotic treatment for presumed cholecystitis. CT and MRI studies demonstrated intrahepatic bile duct dilatation, common bile and pancreatic duct dilatation with abrupt cut-off and a 3cm pancreatic head mass, with restricted diffusion on DWI-ADC sequences, raising suspicion for PDAC [4].

Results

The patient underwent a Whipple procedure. Histopathological examination of the specimen revealed reactive hepatoduodenal lymph nodes and features strongly consistent with type 1 IgG4-related autoimmune pancreatitis, without evidence of malignancy [1,3].

Conclusion

IgG4-related autoimmune pancreatitis can closely mimic pancreatic ductal adenocarcinoma on imaging and clinical presentation, that may lead to overtreatment [2,4]. Awareness of this entity, along with the use of serum IgG4 levels, core biopsy when feasible, and a multidisciplinary approach, may help in differentiating autoimmune pancreatitis from malignancy, improving patient outcomes [1,3].

(312) - PP-147

TARGET IN SIGHT: CEUS PINPOINTS METASTATIC PROSTATE CANCER BEFORE THE BIOPSY SPEAKS

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Introduction

Prostate cancer commonly metastasizes to bone, often requiring imaging to guide diagnosis. However, certain patients present challenges for traditional imaging modalities.

Purpose

To demonstrate the effectiveness of contrast-enhanced ultrasound (CEUS) in identifying and biopsying metastatic prostate cancer in a high-risk elderly patient with contraindications to CT/MRI contrast agents.

Materials and Methods

A 94-year-old male with a history of benign prostatic hyperplasia, previously treated with TURP, presented with acute pelvic pain and impaired mobility. CT imaging revealed a suspicious lytic lesion in the left ilium. Due to renal impairment, CEUS was selected over CT or MRI. A 2.4 mL dose of sulphur hexafluoride microbubbles (SonoVue) was administered intravenously, followed by a 10 mL saline flush. CEUS guided biopsy was performed targeting the hyperenhancing region of the lesion.

Results

CEUS showed rapid arterial enhancement and prompt washout, suggestive of malignancy. Biopsy under CEUS guidance was successfully completed without complication. Histopathology confirmed metastatic adenocarcinoma of prostatic origin (PSA positive).

Conclusion

CEUS is an effective and safe modality for evaluating bone lesions, particularly in patients who cannot undergo contrast-enhanced CT or MRI. It enables accurate diagnosis and facilitates targeted biopsy, as demonstrated in this case of prostate cancer metastasis.

(325) - PP-148

DIAGNOSING APROACH TO KIDNEY CANCER-AN INTERESTING CASE.RADIOLOGY IMAGING DEPARTMENT-GENERAL HOSPITAL OF KAVALA-MAGNETIC RESONANCE NUCLEAR-KAVALA GREECE

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Introduction

Renal sarcoma is a rare type of cancer that forms in the kidney's soft tissue, the connective tissue that surrounds the kidneys or the fat around the kidneys. Fewer than 1 percent of kidney cancers are renal sarcomas, according to the American Cancer Society (ACS).

Purpose

The evaluation of the utility of TAC in the diagnosis of kidney tumors as well as the presentation of interesting cases that do not show no specific laboratory findings

Materials and Methods

Patient 59age , woman comes to the emergency department, with unspecified fever, for five days. The record cartel was Hashimoto, hysterectomy, cardiac pterygism. Blood and biochemical tests were performed where was found increased levels of inflammation –with 18.ooo white blood cells , CRP 14, Hematocrit 29 and piastrine 360,00.

Results

in our case the histological type was sarcoma kidney

Conclusion

Renal sarcoma is a rare type of cancer that forms in the kidney's soft tissue, the connective tissue that surrounds the kidneys or the fat around the kidneys. Fewer than 1-3 percent of kidney cancers are renal sarcomas, the most frequent histological type is leiomyosarcoma .Unfortunately develops and grows very quickly .The only treatment-therapy is the surgical excision. The diagnostic value of CT-Scan in the early management of patients.

(538) - PP-149
MRI EVALUATION OF EXTRASKELETAL EWING SARCOMA

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Introduction
Extraskeletal Ewing Sarcoma (EES) is a rare subtype of the Ewing Sarcoma tumor family (ESFT). The ESFT also includes Ewing Sarcoma of the bone and primitive neuroectodermal tumors, that share a common genetic lineage. The large majority of ESFT cases occurs in children and in bones, however about 25% of cases originate outside the skeleton as EES. In the adult population, this flips and EES is more common than Ewing sarcoma of the bone. It usually presents as a large heterogenous mass, showing signs of necrosis, haemorrhage and rapid growth. The most commonly affected area is the paravertebral region.

Purpose
The aim of the present study is to demonstrate the importance of MRI as the modality of choice in EES for diagnostic imaging and local staging.

Materials and Methods
Four patients (two males, two females) aged 5-28 years old, who were treated at our hospital, were examined with MRI for disease detection, staging and monitoring the affected regions of EES.

Results
This retrospective study of patients' MRI examinations showed affected region of trapezoid muscle in one patient and in subcutaneous adipose tissue of the tibial region in another one. Huge heterogenous thoracopulmonary mass was depicted in two patients, with local invasion of the left hemidiaphragm and extension in the upper left quadrant in one of them. T1-weighted images revealed signal intensity similar to that of muscle with internal areas of necrosis more obvious on the T2-weighted MR images, with enhancement of the solid component and restriction of diffusion on diffusion-weighted imaging (DWI) of the solid component.

Conclusion
MRI is vital for spotting EES along with the necroses and also a very reliable imaging method for spotting potential metastases, thus, playing a role in appropriate patient management.

PEDIATRIC RADIOLOGY

(310) - PP-150
BEYOND THE LUNG FIELDS: UNVEILING THE TRUE CAUSE OF RECURRENT PNEUMONIA IN PEDIATRICS

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Introduction
Recurrent pneumonia in children often prompts evaluation for infectious or immunological causes. However, when symptoms persist despite appropriate management, rare anatomical abnormalities must be considered. Congenital diaphragmatic hernia (CDH) is a rare cause of respiratory symptoms beyond the neonatal period and may mimic common respiratory conditions.

Purpose
To highlight the importance of considering congenital anatomical defects in the differential diagnosis of recurrent pneumonia in pediatric patients and to demonstrate the diagnostic value of cross-sectional imaging.

Materials and Methods
We present a clinical case of an 8-year-old child with multiple episodes of left-sided pneumonia, unresponsive to antibiotics. Initial evaluations including chest auscultation and X-ray suggested persistent lower lobe consolidation. Due to the recurrence of symptoms, further diagnostic imaging with chest computed tomography (CT) was conducted.

Results
Chest CT revealed a left-sided Bochdalek hernia with herniation of abdominal organs (small intestine and colon) into the thoracic cavity, causing compression of the left lung. This finding explained the recurrent respiratory symptoms, which were previously misinterpreted as pneumonia. Surgical consultation was initiated for appropriate management.

Conclusion
This case underscores the need for high clinical suspicion and thorough radiological evaluation in pediatric patients with recurrent pneumonia. Cross-sectional imaging, especially CT, is essential for detecting congenital anomalies such as Bochdalek hernia that may present later in childhood. Early identification prevents misdiagnosis and guides timely intervention, reducing the risk of long-term pulmonary complications.

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MECKEL'S DIVERTICULUM ON ULTRASOUND: FROM HIDDEN ANOMALY TO ACUTE PATHOLOGY

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Introduction

Meckel's diverticulum, the most common congenital gastrointestinal anomaly, (1-4% of the population) results from incomplete obliteration of the omphalomesenteric duct and may contain heterotopic (gastric or pancreatic) mucosa. Often asymptomatic, it can cause significant complications, including gastrointestinal bleeding (ectopic gastric mucosa ulceration), inflammation (Meckel's diverticulitis), intussusception, intestinal obstruction, and perforation. Diagnosis is challenging due to nonspecific clinical signs and overlapping imaging features with other abdominal conditions. Although technetium-99m pertechnetate scintigraphy is classically used, it is diagnostic only when ectopic gastric mucosa is present.

Purpose

To describe the ultrasound characteristics of Meckel's diverticulum and its complications in children, highlighting the key sonographic findings that aid in diagnosis and differentiation from other causes of acute abdomen.

Materials and Methods

A retrospective review was conducted of pediatric patients diagnosed with Meckel's diverticulum over a 7-year period at a tertiary pediatric hospital. All patients underwent ultrasound as part of their initial evaluation. Surgical confirmation or correlation with scintigraphy was available in all cases. Ultrasound appearances with emphasis on key diagnostic findings, clinical presentation, and complications are presented.

Results

Ultrasound in 7 children identified Meckel's diverticulum as a blind-ending, fluid-filled, tubular or round structure arising from the antimesenteric border of the ileum. Wall thickening, surrounding fat stranding, and hyperemia on color Doppler were observed in 4 cases of Meckel's diverticulitis. In 4 cases, the diverticulum was the lead point of an intussusception and in 3 cases it was torsed around a fibrous band causing bowel obstruction. Sonographic detection allowed prompt surgical referral and reduced diagnostic delay.

Conclusion

Although often overlooked, Meckel's diverticulum and its complications can be identified on ultrasound when a high index of suspicion is maintained. Pediatric radiologists should be familiar with its varied sonographic appearances, particularly in the setting of acute abdominal pain or obscure gastrointestinal bleeding.

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OUT OF PLACE, NOT OUT OF SIGHT: SONOGRAPHIC EVALUATION OF PEDIATRIC OVARIAN MALPOSITION AND ITS EMBRYOLOGICAL ASSOCIATIONS

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Introduction

Ovaries and testes share analogous embryological development and consequently, may exhibit similar migration disorders. Although less common than testes, ovaries may fail to descend remaining ectopically, between the lumbar region and the pelvis. Ovarian maldescent is a rare disorder, with an incidence of 0.3-0.5% and may be unilateral or bilateral. Despite their different embryological origin from the uterus and fallopian tubes (Müllerian ducts), maldescended ovaries are often associated with congenital uterine anomalies, observed in approximately 22% of cases. On the other hand, in neonates, the canal of Nuck may fail to close, leading to inguinal herniation that may contain the ipsilateral ovary.

Purpose

To highlight the role of sonography in identifying ovaries in anomalous position, and to emphasize the importance of pediatric radiologist's awareness of the above rare disorders.

Materials and Methods

Over a 10-year-period, 29 girls, aged 4 days to 10 years, with ovarian malposition underwent sonographic evaluation. Clinical presentation varied and included palpable inguinal masses, abdominal pain, and findings from routine or follow-up imaging. The sonographic examination of the lower abdomen was supplemented with evaluation of the kidneys and the inguinal regions when needed.

Results

The sonographic examination revealed: 12 cases of ovarian maldescent, one case of both ovaries' maldescent associated with uterus didelphys, right hydrometrocolpos and ipsilateral renal agenesis, one case of ovarian maldescent, uterus didelphys and ipsilateral renal agenesis, three cases of ovarian maldescent and ipsilateral multicystic dysplastic kidney, 6 cases of ovarian and bowel loops inguinal herniation, 6 inguinal ovaries, and one case of ovarian and uterus inguinal herniation.

Conclusion

When an ovary is not identified in its expected pelvic location, ovarian maldescent or inguinal herniation should be considered. Awareness of these developmental anomalies, along with systematic sonographic evaluation, is essential for accurate diagnosis and management.

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BRAIN IMAGING CORRELATION WITH INTRACRANIAL PRESSURE INDICES AND OUTCOME IN CHILDREN WITH TRAUMATIC AND NON-TRAUMATIC BRAIN INJURY

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Introduction

Traumatic Brain Injury (TBI) results from external forces, where Non-Traumatic Brain Injury (Non-TBI) arises from internal pathological etiologies. Neuroimaging, especially Computed Tomography (CT) and Magnetic Resonance Imaging (MRI), is essential for diagnosis, monitoring, and prognosis. Severity scales such as the Marshall and Rotterdam CT Scores have been extensively used for TBI assessment.

Purpose

The current study aimed to develop a Modified Marshall Score for CT and MRI, and assess their prognostic utility in children with TBI and Non-TBI, and also to correlate with clinical parameters and outcome.

Materials and Methods

A retrospective, single-center study was conducted at the Pediatric Intensive Care Unit (PICU) of the University General Hospital of Heraklion.A total of 138 pediatric patients were included between 2014 and 2024. Demographics, clinical variables, neuroimaging findings, intracranial (ICP) and cerebral perfusion pressure (CPP) monitoring, disease severity scores (PELOD-2), and outcomes (mortality, Functional Status Scale (FSS)) were recorded. The Modified Marshall CT and MRI severity scores for each patient's initial CT and MRI were calculated, when available.

Results

The study included 34 patients with TBI and 104 with non-TBI. The Modified Marshall CT Score significantly correlated with mortality (TBI $p=0.012$, non- TBI $p<0.001$) with cut off ≥ 2.5. Furthermore it was associated with ICP (TBI $p<0.01$), GCS, PELOD-2, mechanical ventilation duration, and FSS (TBI as continuous value $p=0.015$, non-TBI independent prognostic factor $p<0.016$). The Modified MRI Score also predicted mortality (non-TBI $p=0.008$) with cut off ≥ 5.5 and mechanical ventilation duration ($p=0.02$), but showed no direct correlation with ICP, GCS, or FSS, although trends between these and high MRI scores existed.

Conclusion

The Modified Marshall CT and MRI scores carry prognostic value in pediatric TBI and Non-TBI patients, regarding mortality and mechanical ventilation duration. The Modified CT score exhibits stronger correlations with clinical parameters and severity indices, suggesting its potential utility in supporting clinical decision-making.

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APPARENT DIFFUSION COEFFICIENT AS A BIOMARKER OF FETAL BRAIN MATURATION

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Introduction

Fetal brain development accelerates during the second and third trimesters, driven by neuronal proliferation, myelination, and gradual reduction of extracellular water. These microstructural changes influence water molecule diffusion, quantified using the apparent diffusion coefficient (ADC). Understanding region-specific ADC trends may provide a non-invasive biomarker for tracking brain maturation in utero.

Purpose

This study evaluates the utility of ADC as a marker of neurodevelopmental maturation in fetuses with normal brain development and in cases with non-disruptive pathologies, excluding structural brain abnormalities.

Materials and Methods

We retrospectively analyzed 43 fetal MRI scans (3T, Ingenia, Philips Healthcare) from singleton pregnancies between 22–36 gestational weeks. The cohort included healthy fetuses and those with non-disruptive anomalies. ADC values were manually measured in the thalami, pons, cerebellum, and frontal, parietal, temporal, and occipital white matter using standardized regions of interest on axial DWI sequences. Linear regression evaluated correlations between ADC values and gestational age, as well as regional differences.

Results

Significant inverse correlations between ADC values and gestational age were found in the thalamus, pons, and cerebellum, consistent with tissue maturation. The strongest decline was seen in the thalamus (ADC = 1.844 − 0.025 × GA), followed by the pons (ADC = 1.699 − 0.020 × GA) and cerebellum (ADC = 1.654 − 0.015 × GA). No significant correlation appeared in cerebral white matter, though slight upward trends were noted in parietal, temporal, and occipital regions.

Conclusion

ADC values decrease significantly with gestational age in deep thalamic and infratentorial structures, indicating early maturation. In contrast, asynchronous trends in cerebral white matter suggest regionally heterogeneous development, highlighting ADC's potential as a biomarker for assessing fetal neurodevelopmental trajectories in utero.

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PEDIATRIC OPTIC GLIOMAS: RADIOLOGIC PATTERNS AND CLINICAL IMPLICATIONS

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Introduction

Optic pathway gliomas are low-grade tumors that primarily affect children under age of 10 years, accounting for 3–5% of pediatric central nervous system tumors. These neoplasms arise along the visual pathways (optic-nerves, optic-chiasm, optic-tracts and hypothalamus) and may occur sporadically or with neurofibromatosis type I. Presentations often include ophthalmologic and neurologic symptoms.

Purpose

This study aims to highlight the shared clinical features and imaging appearances of pediatric optic pathway gliomas through a series of five cases. By analyzing their presentation, radiologic characteristics on MRI and CT and the range of management approaches, we seek to emphasize the importance of early recognition, accurate diagnosis and the role of multidisciplinary care in optimizing visual and neurologic outcomes in affected children.

Materials and Methods

We reviewed five children (ages 2–9 years) diagnosed with optic pathway glioma. Each patient underwent comprehensive eye and neurologic evaluations. Neuroimaging included MRI with paramagnetic agent administration (T1 and T2-weighted sequences) and complementary CT. Clinical findings and imaging were correlated.

Results

All patients had visual disturbances (strabismus or diplopia) and neurologic signs (ataxia-vomiting) and some showed proptosis or hypothalamic dysfunction. MRI revealed mixed cystic and solid masses along the optic pathway, high signal on T2-weighted images with variable contrast enhancement. The lesions involved the optic nerves, chiasm and optic tracts, with extension into the hypothalamus, causing mass effect on adjacent structures. CT scans delineated lesion extent and any bone involvement. Diagnosis was made by correlating clinical and imaging findings. Management was individualized with options such as observation, chemotherapy or radiotherapy selected according to tumor behavior and visual function. Follow-up involved regular MRI scans and detailed ophthalmic evaluations.

Conclusion

Pediatric optic pathway gliomas present with overlapping visual and neurologic features. MRI (with CT) is essential for diagnosis and follow-up. Multidisciplinary care, including neurosurgery, oncology and ophthalmology, is critical to balance tumor control with preservation of vision.

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SONOGRAPHIC RECOGNITION OF LIPOHEMARTHROSIS IN TRAUMATIC KNEE EFFUSIONS: A DIAGNOSTIC CHALLENGE

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Introduction

Acute knee trauma is a common presentation in the emergency department. Prompt and accurate diagnosis and management are crucial to prevent potential complications. Lipohemarthrosis (LH) is defined as the accumulation of blood and fat in the joint cavity, resulting from the extrusion of bone marrow contents into the joint space after an intraarticular fracture. Its presence is important for detecting occult fractures not visible on radiography and CT.

Purpose

The presentation of LH's characteristic ultrasound (US) findings, that enable the paediatric radiologist to diagnose LH and suggest the presence of intraarticular fracture.

Materials and Methods

A 14-year-old male presented to the emergency department of our hospital with left knee pain and swelling following an injury during a football game the same day. He had no previous clinical or surgical history. Clinical examination suggested the presence of joint effusion, therefore a knee joint radiograph and US were performed in our department.

Results

Radiograph showed no fractures. US revealed an effusion in the suprapatellar bursa of the knee joint and less fluid in the infrapatellar and the popliteus bursa. The effusion consisted of two fluid–fluid levels and three distinct layers: a superior hyperechoic (fat), an intermediate anechoic (serum), and an inferior hypoechoic (blood cells), separated by straight lines. These findings indicated the presence of LH of the left knee. The MRI that followed didn't show any intra-or extraarticular fracture. Effusion drainage and joint immobilization with a splint placement were decided as the therapeutic management of choice.

Conclusion

Sonography, with its known advantages (lack of radiation, availability, noninvasiveness), has been proven particularly useful in the initial evaluation of pediatric patients with knee injuries. Knowledge of normal knee joint anatomy is prerequisite to conduct an effective examination of the affected area. Identification of LH should prompt thorough search for associated intraarticular fracture.

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SONOGRAPHIC DETECTION OF RENAL VENOUS THROMBOSIS IN NEONATES: REVEALING THE INVISIBLE

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Introduction

Renal venous thrombosis (RVT) is a rare but severe pathology of newborns, and one of the most common manifestations of neonatal thrombosis. Its clinical presentation is often atypical and its significant complications (hypertension, renal failure/atrophy) are not uncommon. Therefore, prompt recognition and management are of utmost importance. Sonography (US) being fast, noninvasive and reliable, is the method of choice for diagnosis and follow-up.

Purpose

The detailed presentation of neonatal RVT US findings, their chronological sequence in different cases and their prognostic value.

Materials and Methods

The medical records of 7 newborn infants examined in our department over a 10-year period (2015-2024), whose final diagnosis was RVT, were reviewed. RVT was clinically suspected in 60% of cases. In the remaining cases, clinical and laboratory features were inconclusive. The diagnosis in all cases was established sonographically, using gray-scale and color/power Doppler sonograms.

Results

Initial US findings included renal enlargement, increased echogenicity, loss of corticomedullary differentiation, hypoechoic pyramids, echogenic medullary streaks (interlobar and arcuate veins' thrombosis) and subcapsular fluid collections, appearing in various combinations. Decreased venous flow, elevated resistance index, or reversed end-diastolic flow in the main renal artery were helpful Doppler signs. Within a few days collateral circulation, a patchwork of hyper- and hypo-echoic parenchymal regions (infarcts, hemorrhage, edema) and a thrombus within the renal vein and the inferior vena cava in some cases, were demonstrated. By two weeks US revealed calcifications and renal atrophy in some neonates, while recanalization and recovery of renal flow in others.

Conclusion

Neonatal RVT presents characteristic US findings, on both gray-scale and Doppler imaging, enabling the pediatric radiologist to establish a reliable diagnosis and thereby ensuring that no valuable time is lost in initiating the appropriate treatment. Furthermore, their follow-up over time has prognostic significance for the future of the affected kidney.

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PEDIATRIC LANGERHANS CELL HISTIOCYTOSIS WITH EXTENSIVE SKULL INVOLVEMENT: THE DIAGNOSTIC ROLE OF RADIOGRAPHY AND ULTRASOUND

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Introduction

Langerhans Cell Histiocytosis (LCH) is a rare disease characterized by abnormal monoclonal proliferation of Langerhans cells, most prevalent in children. It can affect every organ because of the accumulation of these cells. LCH presents as either a single-system or multisystem disorder, with heterogeneous clinical features and a wide spectrum of imaging findings.

Purpose

This rare case report aims to familiarize pediatric radiologists with uncommon LCH imaging features, underlining the importance of including it in the differential diagnosis of pediatric scalp masses. Moreover, it highlights the role of ultrasound as a valuable supplementary tool to plain radiography in evaluating superficial cranial lesions.

Materials and Methods

We present the case of a two-year-old boy who presented at the Emergency Department of our Hospital, with multiple non- traumatic, localized palpable scalp masses. Initial imaging included anteroposterior and lateral skull radiographs. Complementary chest radiograph, scalp and abdominal ultrasound examinations were performed, to refine diagnosis and assess potential systemic involvement. A CT scan and histopathologic examination after biopsy confirmed LCH.

Results

Skull radiographs revealed multiple large punched-out lytic lesions without sclerotic borders. Focused scalp ultrasound showed several well- defined fluid collections with extra- and intracranial components along with erosion of both cranial tables. Chest radiograph showed diffuse bilateral symmetrical reticulonodular pulmonary pattern. No significant findings were identified on the abdominal ultrasound.

Conclusion

Multifocal LCH in pediatric patients with large lesions poses a significant diagnostic challenge, due to its rarity. Pediatric radiologists should be familiar with its key radiography features, to provide an imaging basis for a prompt diagnosis. Additionally, ultrasound proves to be a valuable tool for evaluating LCH lesions, especially in atypical presentations.

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NEONATAL AND YOUNG INFANTILE VOMITING EMERGENCIES: ULTRASOUND TO THE RESCUE

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Introduction

Neonatal vomiting is a leading reason for emergency department visits in neonates and young infants. Its causes range from benign to serious conditions requiring urgent intervention. Until ruled out, vomiting—especially bilious or projectile—is considered a critical warning sign. Hypertrophic pyloric stenosis, and midgut volvulus are key conditions linked to neonatal emesis. Their prompt identification is critical, as they require surgical treatment. Ultrasound is the imaging modality of choice in evaluating these patients, as it avoids radiation exposure and serves as the first-line diagnostic tool for distinguishing between these two entities.

Purpose

We aim to demonstrate cases where ultrasound was instrumental in identifying the inducing cause of neonatal vomiting in the emergency setting.

Materials and Methods

We included cases from our database (Radiology Department of a tertiary children's hospital), where ultrasound was of paramount importance in the prompt, accurate diagnosis. In each instance, the ultrasound findings were correlated with the patients' presenting symptoms and surgical outcomes.

Results

The ultrasound findings, which are specific in each clinical entity, are presented. The findings are discussed in the context of differential diagnosis based on clinical presentation and imaging results.

Conclusion

Neonatal vomiting must be approached as a clinical emergency. Accurate clinical history—particularly distinguishing bilious versus non-bilious emesis—guides appropriate radiologic investigation. Ultrasound continues to play a crucial role in identifying life-threatening causes such as hypertrophic pyloric stenosis and midgut volvulus, proving its value in emergency pediatric imaging and enhancing patient care.

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CONGENITAL HEMANGIOMA WITH INTRACRANIAL EXTENSION: A RARE CASE REPORT

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Introduction

Congenital hemangiomas are rare benign vascular tumors that are fully developed at birth. They are typically limited to the skin and subcutaneous tissues. Intracranial extension is extremely rare and may mimic vascular malformations or suggest neurocutaneous syndromes such as PHACE.

Purpose

To present a rare case of congenital hemangioma with intracranial extension and subtle midline brain anomalies in an infant, and to emphasize the importance of accurate radiological evaluation.

Materials and Methods

A 5-month-old female infant presented with a soft tissue lesion involving the frontal region, upper eyelid, and nasal tip, which had been present since birth. She was referred to our hospital for conservative management. A transfontanellar ultrasound was performed, followed by brain MRI and MR angiography.

Results

Initial brain ultrasound revealed a hyperechoic lesion with internal vascularity in the anterior interhemispheric fissure. MRI confirmed a vascular lesion consistent with congenital hemangioma in the same region, as well as an additional lesion in the right orbit. Associated findings included bilateral frontal white matter volume reduction, partial agenesis of the anterior corpus callosum, and minor fusion of the gyri recti. MR angiography showed no arterial abnormalities. Neurological, ophthalmological, and cardiac evaluations were unremarkable. Although PHACE syndrome was considered, the absence of major systemic anomalies precluded a definitive diagnosis.

Conclusion

This case represents an extremely rare manifestation of congenital hemangioma with intracranial extension and subtle midline brain anomalies. Accurate imaging played a crucial role in diagnosis and in excluding more aggressive or syndromic entities. While the findings were suggestive of an atypical form of PHACE syndrome, the diagnostic criteria were not fully met. Continued radiological and clinical follow-up is warranted.

THORACIC RADIOLOGY

(534) - PP-161
BRONCHOCENTRIC FIBROSIS: DO WE BENEFIT FROM RECOGNIZING THIS PATTERN?

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Introduction
The distribution of fibrotic changes on chest CT, including cranio-caudal and temporal spread, is a critical imaging feature in radiology reports. Combined with auxiliary findings, this distribution guides the diagnostic process. Bronchocentric and subpleural patterns are two entities, often coexisting or appearing independently.

Purpose
To present typical and atypical cases of pulmonary fibrosis with bronchocentric distribution from our practice, compare its terminology use among our radiology team, and evaluate its impact on the diagnostic process. We also aim to discuss standardized terminology, including “bronchocentric,” “bronchiolocentric,” and “airway-centered interstitial fibrosis.”

Materials and Methods
High-resolution chest CT studies were retrospectively reviewed by our team, comprising radiologists with varying thoracic imaging expertise. Fibrotic changes, such as traction bronchiectasis and reticulations, predominantly in central lung regions were classified as bronchocentric. We compared terminology usage between chest-specialized radiologists and the broader team.

Results
Chest-specialized radiologists showed high agreement in identifying bronchocentric distribution, but the term was less commonly used by others. This pattern was frequently noted in sarcoidosis and fibrotic hypersensitivity pneumonitis, where, alongside clinical data and imaging findings, it facilitated multidisciplinary team decisions. Similar changes were observed in tuberculosis and occupational lung diseases, necessitating careful differential diagnosis. However, classifying advanced fibrotic changes as bronchocentric remains challenging, even for experienced radiologists.

Conclusion
Recognizing bronchocentric fibrosis on chest CT, combined with clinical and imaging data, enhances diagnostic certainty and expedites the process. Standardizing and promoting the use of this term among radiologists, particularly in typical cases, could improve diagnostic consistency and efficiency.

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DOCETAXEL INDUCED FLUID RETENTION FINDINGS : A CASE REPORT

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Introduction
Taxane is one of the drugs used in the adjuvant, neoadjuvant, and metastatic treatment of breast cancer patients. It is generally well tolerated among the chemoteurapatic drugs. However, adverse events can include infusion reactions, febrile neutropenia, fatigue, fluid retention (peripheral edema, pleural and pericardial effusion), intracranial hypertension, pneumonitis, cutaneous and nail toxicity, epiphora and lacrimal duct stenosis, gastrointestinal complications, and neuropathies. Especially when used with Doxorubicin and Cyclophosphamide, the risk of edema increases and the clinical monitoring of these symptoms in taxane-treated patients becomes more crucial.

Purpose
To present a case of docetaxel-induced fluid retention, including pleural and pericardial effusion, perioptic cerebrospinal fluid (CSF) accumulation,and its clinical management.

Materials and Methods
A 48-year-old female patient with a history of breast cancer who had received 3 cycles of taxane presented to the emergency department with symptoms including vomiting, shortness of breath, double vision, blurry vision, and periorbital edema. A thoracoabdominopelvic CT scan revealed pleural effusion, minimal intraabdominal fluid density, pericardial fluid increase, and subcutaneous edematous density(Figure1). Ophthalmologic examination showed optic disc contour irregularities without papilledema. An orbital MRI showed a mild increase in the periorbital cerebrospinal fluid (CSF) distance(Figure 2a-2b). Previous imaging, conducted before taxane therapy, was normal, excluding other causes such as pneumonia or metastatic involvement.

Results
Taxane-based chemotherapy was discontinued, and treatment with diuretics and prednisone was initiated for 21 days. By the 2nd day of treatment, symptoms including shortness of breath, blurry vision, and periorbital edema had significantly improved. By the 21st day, all symptoms had completely resolved.

Conclusion
Taxanes are mostly well tolerated but some patients may experience fluid retention such as peripheral edema, macular edema, and pleural effusion. The clinical and radiological follow-up correlated with clinical findings crucial for taxane-treated patients. Early detection and treatment of side effects enhance the patient's quality of life.

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SPECTRUM OF THORACIC HYDATID DISEASE: EXPERIENCE FROM AN ENDEMIC REGION

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Introduction

Hydatid disease, caused by the larval form of Echinococcus granulosus, poses a persistent diagnostic challenge in endemic regions. Although pulmonary involvement is common, atypical thoracic localizations—such as mediastinal, pleural, and pericardial—demand advanced imaging for accurate detection and characterization.

Purpose

To present the multidetector computed tomography (MDCT) features of thoracic hydatid cysts in North Macedonian patients and evaluate the modality's diagnostic utility in identifying cyst types, complications, and uncommon anatomical presentations.

Materials and Methods

This retrospective study included 55 patients diagnosed with thoracic hydatid disease at the Institute of Radiology in Skopje, North Macedonia. All patients underwent contrast-enhanced chest CT scans. Imaging findings were systematically categorized into: (1) uncomplicated pulmonary cysts, (2) extrapulmonary thoracic cysts, and (3) complicated or ruptured cysts. Specific CT signs—such as the air crescent, water lily, and dry cyst signs—were analyzed, along with associated parenchymal or pleural changes.

Results

CT successfully identified and localized all hydatid lesions, with 65% located within lung parenchyma, 22% in extrapulmonary sites (e.g., mediastinum, pericardium), and 13% presenting as complicated cysts. Classical imaging signs were confirmed in 70% of cases, with water lily and cumbo (double arch) signs being most prevalent. CT further revealed complications including membrane rupture, reactive pneumonia, and pleural effusion in advanced cases.

Conclusion

MDCT plays a pivotal role in the evaluation of thoracic hydatid cysts, enabling detailed morphological assessment and detection of both typical and atypical forms. It is indispensable for guiding diagnosis, anticipating complications, and differentiating hydatidosis from other thoracic pathologies in endemic regions. This study highlights the diverse imaging spectrum and reinforces the value of CT in optimizing patient outcomes.

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OVERORDERING OF CTPAS IN PATIENTS WITH SUSPECTED PULMONARY THROMBOEMBOLISM?

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Introduction

Pulmonary thromboembolism (PTE) is a common cause of cardiovascular mortality related to obstructed pulmonary arteries. Associated manifestations include non-specific dyspnea, pleuritic pain, cough, hemoptysis, syncope. Even though the combination of D-dimer and clinical scoring (Wells and Geneva scores) allows exclusion of PTE in approximately 30% of patients, rendering imaging un justified, clinical scores appear underutilized in clinical practice while computed tomography pulmonary angiography (CTPA) seems to be overused.

Purpose

To evaluate appropriateness of CTPA referrals and their yield in real life.

Materials and Methods

A retrospective chart analysis of CTPAs in 305 patients, 144 women, 162 men, mean age 69.5 years, was conducted at a regional University hospital in Greece from March to June 2025. Parameters including risk factors, signs and symptoms, comorbidities (preexisting interstitial lung disease, infection, pleural and pericardial effusions, neoplastic diseases), and D-dimer levels were recorded.

Results

281 patients (92%) presented with dyspnea, tachycardia and/or chest pain, 21 (7%) with symptoms or presyncope-syncope and 3 (1%) with hemoptysis. D-dimer levels were measured before CTA in 287 patients (94%) and found positive in 184 (64%). Pulmonary thromboembolism was detected on CTPA in 46 patients (15.1%) while 27 (59%) of them had positive D-dimers. In the remaining 19 patients D-dimer levels were not measured before CTPA but had been elevated in the past due to comorbidities (neoplastic diseases, recent surgery, infectious/aspiration pneumonia and ARDS/pulmonary oedema). Symptoms in patients with negative CTPA for PTE were finally attributed to large pleural effusions and /or lung infection, / neoplastic bronchial compression, large pericardial effusions or exacerbation of preexisting interstitial lung disease.

Conclusion

A more meticulous evaluation of clinical probability scores and D-dimer levels may prevent inappropriate requests for CTPAs, thus reducing unnecessary workload and patients radiation exposure in clinical practice.

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RADIOGRAPHIC RECOGNITION OF CARDIOVASCULAR DEVICES IN CHEST IMAGING.

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Introduction

Number of Implanted Cardiovascular Devices (ICDS) has dramatically increased over the past decade. Recent generation ICDS exhibit greater complexity in both design and imaging appearance. Chest Radiography is often the only imaging modality that allows evaluation of the physical integrity of ICDS.

Purpose

The aim of this poster is to capture radiologist's attention for the identification of ICDS in CXR, as they could confirm their proper placement and detect possible compications.

Materials and Methods

This poster was based on several cases from our institution in combination with a comprehensive literature search.

Results

We gathered several notable cases of ICDS along with some of their complications as visualized on CXR

Conclusion

Summarizing, basic knowledge of the normal and abnormal radiographic appearances of ICDS is important as radiologists play a crucial role in providing vital information for the patients with ICDS. In addition, as CXR is the most common imaging modality, radiologists contribute with valuable details on the patients medical history.

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IMPLEMENTING LDCT SCREENING FOR LUNG CANCER IN GREECE: EARLY DATA FROM THE SOLACE PROJECT

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Introduction

Lung cancer (LC), mainly caused by smoking, is the leading cause of cancer-related deaths globally. Lung cancer screening (LCS) with low-dose computed tomography (LDCT) of the chest in high-risk individuals reduces mortality through early detection. The "Strengthening the screening Of Lung Cancer in Europe" (SOLACE) project is a EU4Health project which aims to evaluate and implement LCS in Europe. In Greece, it represents the first organized effort to facilitate LCS.

Purpose

This poster aims to present demographic and imaging data of recruited individuals who participated in SOLACE project at Sotiria Hospital from May 2024 to February 2025.

Materials and Methods

High risk individuals were recruited, belonging to the following categories: 1. Women, 2. Hard-to-reach populations. Inclusion criteria were: 1. Age 50-75, 2. Smoking history: current or former smokers. Exclusion criteria were: 1. history of malignancy (within last 5 years) 2. prior diagnosis of LC. Participants underwent LDCT and scans were assessed based on the European Position Statement nodule management protocols. Demographic data were collected and incidental imaging findings were also studied.

Results

300 participants were recruited during this period (237 females, 63 males), with the majority (88%) being active smokers. Of these, 115 began smoking before the age of 18. Seven (7) participants had positive scans and were referred to for further testing, with nearly half (4/7) having biopsy-proven LC. 42 scans were indeterminate and prompted early recalls; among these, 3 patients had biopsy-proven LC. Only 2 of the biopsy-proven cases were diagnosed at stage I, while the rest were stage II or higher.

Conclusion

The SOLACE project in Greece represents the first effort in LCS implementation and highlights the need for a centralized, nation-wide program in order to facilitate early LC detection.

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MEDIASTINAL ABSCESS AS COMPLICATION OF TYP IV HIATUS HERNIA SURGERY

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Introduction
A mediastinal abscess is a rare and potentially life-threatening condition often resulting from complications of trauma, thoracic surgery, or esophageal perforation and rare from infections spreading from adjacent areas or hematogenous spread. It is characterized by the formation of a pus-filled cavity within the mediastinum. Symptoms are: fever, chest pain, dyspnea, dysphagia, hoarseness, cough, and signs of systemic infection. Diagnosis is made by: imaging studies (CT scans and MRI), blood cultures (to identify the causative bacteria), esophagoscopy and sometimes bronchoscopy. Treatment involves: intravenous antibiotics, surgical or percutaneous drainage of the abscess, rare endobronchial ultrasound-guided transbronchial needle aspiration and supportive care.

Purpose
This case shows us that CT scans are essential for visualizing the mediastinal abscess and assessing its extent.

Materials and Methods
Patient was a case of type IV hiatus hernia proven on CT (stomach and colon with both flexures herniate through the esophageal hiatus into the chest cavity). Since we are a general hospital, the patient was referred to the University Clinical Centre of Serbia in Belgrade (UCCS), where he underwent the surgery to resolve the problem. Ten days after surgery, the patient had complaints of chest pain, cough with expectoration, fever and dysphagia. He came to the emergency room at our hospital where an emergency CT scan of the thorax and abdomen was performed.

Results
Standard CT of the chest and abdomen showed a large fluid collection in the posterior lower mediastinum with a postcontrast-enhancing wall that dislocates and compresses the esophagus and is consistent with an abscess. The patient was referred to the UCCS where additional diagnostics and CT-guided transthoracic drainage were performed with good outcome.

Conclusion
Standard MDCT of the thorax and abdomen plays an important role in detecting, visualizing, and showing the extent of complications after thoracic surgery and in emergency cases, quickly arriving at the correct diagnosis.

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POSTERIOR MEDIASTINAL MASS: FROM CHEST X-RAY TO FINAL DIAGNOSIS WITH CT IMAGING

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Introduction

Posterior mediastinal masses are uncommon findings typically identified incidentally on chest imaging. Neurogenic tumors represent the most common etiology of posterior mediastinal masses, comprising 75% of cases, and include schwannomas, neurofibromas, and ganglioneuromas, with both benign and malignant potentials [1,2].

Purpose

To illustrate the radiological pathway from initial chest X-ray detection to final CT-based characterization of a posterior mediastinal mass in a young female adult.

Materials and Methods

A 23-year-old female with no significant past medical history presented with left-sided chest pain. A chest X-ray was performed in the emergency setting, followed by a dedicated chest CT scan for further evaluation.

Results

Initial chest X-ray demonstrated a well-defined convex opacity projecting towards the left hemithorax, without obscuration of the left hilar structures or cardiac silhouette, raising suspicion for a posterior mediastinal mass. Subsequent chest CT revealed a large, well-circumscribed, soft-tissue attenuation mass in the left paravertebral gutter, with widening of the adjacent neural foramen and erosion of the adjacent vertebral body. These findings were highly suggestive of a neurogenic tumor, likely a benign schwannoma, consistent with the typical imaging features described for neurogenic posterior mediastinal tumors [3,4].

Conclusion

Chest X-ray can provide early suspicion of a posterior mediastinal mass, while CT imaging is essential for precise anatomical localization, characterization, and detection of features such as neural foramen widening and bone erosion that are characteristic of neurogenic tumors. Awareness of these imaging patterns facilitates appropriate diagnosis and management planning.

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IMPACT OF DEEP VS. MODERATE NEUROMUSCULAR BLOCKADE ON POSTOPERATIVE ATELECTASIS IN BARIATRIC PATIENTS: A CT-BASED QUANTITATIVE ANALYSIS

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Introduction

Maintaining adequate pneumoperitoneum and surgical field visibility is essential in bariatric laparoscopic surgery. While deep neuromuscular blockade (NB) offers clinical advantages, it may also elevate the risk of postoperative atelectasis.

Purpose

This study aimed to assess how the depth of NB affects atelectasis incidence in elective bariatric surgery patients.

Materials and Methods

Patients were randomly assigned into two groups: Moderate NB and Deep NB. The primary outcome was the percentage and volume of postoperative atelectasis, measured by chest computed tomography (CT) four hours postoperatively. CT images were retrospectively analyzed using Vitrea advanced workstation, to quantitatively measure the aerated and atelectatic lung volumes using threshold methods. The proportion of postoperative atelectasis was defined as atelectatic lung volume/total lung volume (atelectatic lung volume + aerated lung volume).

Results

A total of 55 patients were included in the analysis (28 with moderate NB, 27 with deep NB). Age, sex and BMI distribution were similar between the two groups. BMI ranged between 36.3-64.3, and it didn't correlate with either the volume (r=-0.192, p=0.174) or the percentage of atelectasis (r=-0.187, p=0.184). Similarly, the depth of NB did not affect the volume of atelectasis (moderate NB: median: 13.5 ml, deep NB: median: 25.3 ml, p=0.831) or its percentage in the total lung volume (moderate NB: median: 0.39%, deep NB: median: 0.67%, p=0.992). This was confirmed by multivariable analysis, which showed that the NB depth was not an independent risk factor for a larger area of atelectasis either in absolute volume (B=0.85, 95% CI:-20.382 to 22.083, p=0.936) or as a percentage of the total lung volume (B=-0.322, 95% CI:-1.29 to 0.647, p=0.507). Furthermore, there was no difference regarding postoperative hospital stay (p=0.879) or complication rate (p=1)

Conclusion

The depth of NB did not affect atelectasis percentages under appropriate ventilation; however, the limited sample size necessitates further investigation.

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PULMONARY ALVEOLAR PROTEINOSIS – CASE PRESENTATION AND DIFFERENTIAL DIAGNOSIS

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Introduction

Pulmonary alveolar proteinosis (PAP) is a rare interstitial lung disease characterized by the accumulation of surfactant-derived material within the alveoli, leading to impaired gas exchange. Symptoms are often nonspecific making diagnosis challenging. Radiologically, it presents with distinctive patterns on high-resolution computed tomography (HRCT), making imaging a key component in the diagnostic process.

Purpose

We aim to present the typical radiological findings of pulmonary alveolar proteinosis and potential differential diagnosis.

Materials and Methods

We report the case of a 55-year-old male who presented with a 2-month history of progressive dyspnoea even during light daily tasks and dry cough. There were bilateral crackles in late inspirium. O2 saturation was 87%, blood gas analysis showed hypoxia and spirometry restriction. On antibiotic and corticosteroid therapy there was no improvement.

Results

Chest radiography showed bilateral consolidation and reticular opacities in middle and lower parts of the lung. High-resolution computed tomography (HRCT) of the chest showed a characteristic "crazy-paving" pattern - diffuse ground-glass opacities with superimposed interlobular septal thickening and intralobular lines, and geographical distribution. This raised strong suspicion for PAP, which was later confirmed via bronchoalveolar lavage. The patient underwent whole lung lavage (WLL), resulting in significant clinical and radiological improvement.

Conclusion

Differential diagnosis for „crazy paving“ pattern on HRCT in subacute/chronic disease includes usual interstitial pneumonia (UIP) and non-specific interstitial pneumonia (NSIP), but in our case there were no signs of lung fibrosis. This case highlights the critical role of radiologic imaging in the early identification and diagnosis of PAP. The "crazy paving" pattern on HRCT remains a hallmark finding that should prompt consideration of PAP in the differential diagnosis of diffuse lung disease. Radiologists play a pivotal role not only in the initial recognition but also in monitoring treatment response and disease progression.

UROGENITAL RADIOLOGY

(372) - PP-171

LOW GRADE RENAL CARCINOMA MIMICKING ONCOCYTOMA: IMAGING FINDINGS AND THE ROLE OF CEUS

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Introduction

Renal incidentalomas may include Angiomyolipoma , Oncocytoma and Renal Cell Carcinomas. Oncocytomas are relatively rare benign lesions. Differentiation between RCC can be challenging. We present a low grade RCC with imaging features similar to oncocytoma using CEUS .

Purpose

Our purpose is to highlight the diagnostic challenge of distinguishing between RCC and oncocytoma on imaging and to explore the potential correlation between hemodynamic behavior in CEUS and histological grading in indeterminate cases.

Materials and Methods

A 63 year-old male on evaluation for persistent fever since two months. Incidental solid renal lesion in three-phase CT. In order to gather more information, we obtained ultrasound images before and after the administration of SonoVue intravenously.

Results

CT: 4.2 cm hyperenhancing lesion with central cystic area corresponding to necrosis or scar in the arterial phase. Lesion remains isodense to the renal cortex in the nephrographic phase. Ultrasound B -mode: Isoechoic lesion with central anechoic area. Color Doppler: Spoke-wheel peripheral microvascularization CEUS: 32 sec post SonovueTM contrast agent IV injection demonstrates avid homogeneous hyperenhancing lesion with non enhancing central area. 65s post SonovueTM injection the lesion demonstrates no wash-out and remains hyperenhancing relative to the renal cortex. No contrast uptake in the central anechoic area. 3 mins post SonovueTM injection the lesion remains hyperenhancing relative to the renal cortex.

Conclusion

Imaging features in CEUS mostly consistent with oncocytoma. Percutaneous renal biopsy proved a grade I ccRCC. CEUS findings correlate well with the CT findings. Findings indicative of benignity may point towards the diagnosis of low grade / well differentiated carcinomas such as in our case. The close histological resemblance between oncocytoma and low-grade renal cell carcinoma, particularly due to their shared oncocytic features, may account for their similar hemodynamic behavior observed on imaging. Further research may reveal a correlation between hemodynamic behavior in CEUS and histological grading in indeterminate cases.

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RARE SARCOMATOID TYP CARCINOMA PROSTATE : CASE PRESENTATION

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Introduction
Sarcomatoid carcinoma of the prostate is rare variant of agressive prostatic cancer with poor prognosis.Tumors are most commonly comoposed of an admixture of both malignant glandular and spindle cell elements.

Purpose
MRI is superior imaging methods for prostate cancer for local staging and follow up .

Materials and Methods
A 73 years old man presented our department with acute urinary retention .He drinks alcohol and has cirrhosis .Urea, creatinin and PSA is normal . Ultrasound reported heteroehogenic large mass 10cm diametar in pelvis , and cirrhotic liver . On Ct imaging (Picture 1.and 2.) prostate is enlarge diametar 16x10cm (APxLL) , heterodense structure with hypodense cystic-necrotic degeneration . After Ct patient is planned for MRI imaging pelvis after 1. months where is prostata enlarge diametar 11x10x16cm (APxLLxKK) , heterogenous signal intensity structure without clear zonal parenhim . Left prostate lobus is complet cystic degeneration with T2 hipointense lesion diametar 5,1x1,5cm(LLxAP) with restriction diffusion on posterior aspect peripheral zone on 5-8 o'clock with infiltration seminal vesiculae .Enlarge ingvinal pathologic lymph nodes, without invasion rectum and bladder. PI-RADS 5.

Results
Patient underwent transrectal biopsia and pathologic confirm sarcomatoid variant adenocarcinoma prostate , grV , Gleason score 10 (5+5).

Conclusion
MRI is most sensitive and specific imaging method for analysis prostate .

(419) - PP-173
TITLE: CROSSED FUSED RENAL ECTOPIA DIAGNOSED IN A YOUNG ADULT.

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Introduction
Crossed fused renal ectopia is one of the rare congenital anomalies in which one kidney (usually the right) is located on the side opposite to its normal anatomical location and is fused with the contralateral kidney.

Purpose
Case presentation: We present a 22-year-old woman diagnosed with a left to right crossed fused renal ectopia fusion upper and lower poles.

Materials and Methods
Patient presented with vague abdominal pain and diagnosis initially was made with abdominal ultrasound examination and gave us an appearance of a L-shaped type but on careful inspection and further examination with CT urography, we came across a case of crossed fused left to right ectopia with fusion of both upper and lower poles of the kidneys, so the diagnosis of discoid kidney with a morphology like a ´´pancake´´ was made. Generally, in cases of crossed fused renal ectopia, one kidney is lower than the other one but, in our report, both kidneys were present at the same level.

Results
From the detailed inspection of the relative anatomical variation, it was determined that two ureters arise, two renal arteries and veins, and finally two polar arteries, where one arises from the abdominal aorta and the second from the right iliac artery. A displaced and tortuous course of the right ovarian vein was also observed.

Conclusion
During workup of abdominal pain, this finding was detected with no gross abnormality except for a tiny calculus. It was the second admission for this present patient with recurrent right flank pain probably from a small calculus in the upper moiety of the fused kidney.

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THE ROLE OF T2WPULSE SEQUENCE AND DIFFUSION WITH ITS NUMERICAL ADC MAP IN PROSTATE CANCER DIAGNOSIS

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Introduction

In patients with increased PSA (prostate-specific antigen), the next diagnostics tool is transrectal ultrasound-guided biopsy-TRUS. Multiparametric magnetic resonance imaging (mpMRI) as non invasive diagnostic tool is used as a triage test to avoid biopsy, as well as to improve the diagnostics.

Purpose

In our study we want to prove the clinical meaning of T2W pulse sequence and diffusion as a part of mp MRI in prostate malignant lesions detection and their distinction from the benign lesions.

Materials and Methods

This cohort prospective study included 100 patients with increased levels of PSA from 4 ng/ml to 76 ng/ml. The MRI equipment used was Siemens Essenza1,5T with body coil. The results from the T2W pulse sequence and diffusion are correlated with the values of diffusion and ADC map. The MRI results and the pathohistological findings are then compared. Clinically significant cancer is considered to be a cancer with a Gleason score 6, diameter > 6mm. Hyposignal of T2W pulse sequence is characterized with score 2 and 3 in benign changes, and 4 and 5 in malignant changes using the PI RADS score system for differentiation

Results

In our study the diffusion has shown to be a highly sensitive method with 89,1% and specificity of 87,8% in 96 evaluated patients.With our study we have shown that T2W by itself is not enough for prostate carcinoma detection, apart from advanced carcinomas, but combined with diffusion and ADC map, the sensitivity and the specifics of the method are increased. It’s sensitivity id 89,8%, the specificity is 95% and is almost the same compared to some studies where they are 58-71% and 77-98%.

Conclusion

T2W pulse sequence combined with diffusions a powerful tool for non-invasive differentiation of benign prostatic hyperplastic nodule and prostatitis from a malignant nodule.