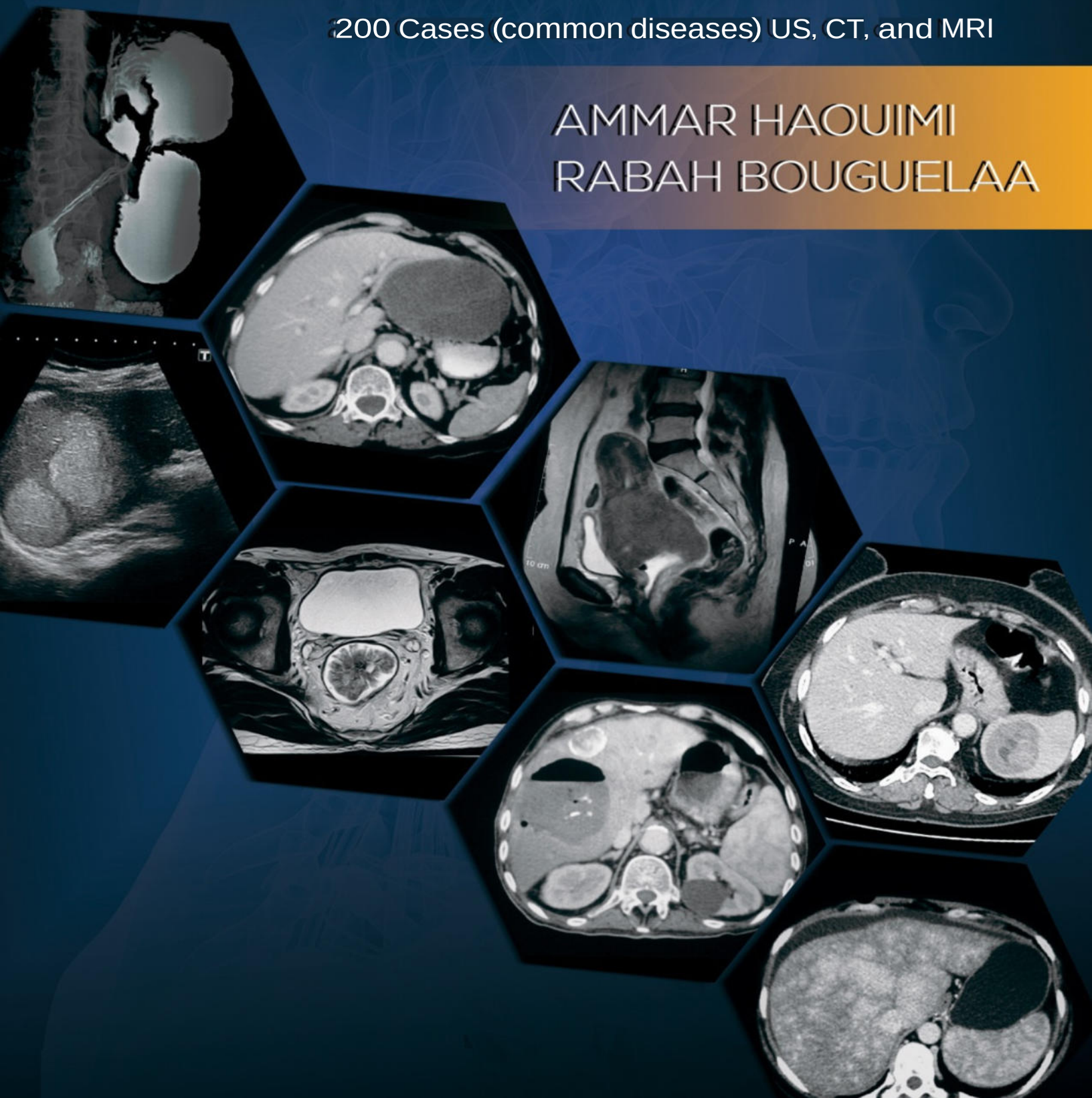
Abdominal-Pelvic IMAGING

200 Cases (common diseases) US, CT, and MRI

AMMAR HAOUIMI
RABAH BOUGUELAA



Abdominal-Pelvic Imaging

200 CASES (COMMON DISEASES): US, CT AND MRI

Ammar HAOUIMI

DIS, DUCT, DURP, EDUS (France)
Consultant Radiologist
Centre D'Imagerie Médicale Aurès
Batna, Algérie

Rabah BOUGUELAA

DIS (France)
Consultant Radiologist
Centre D'Imagerie Médicale Aurès
Batna, Algérie

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Abdominal-Pelvic Imaging

About the Author

Dr. Ammar Haouimi is a French trained internationally renowned radiologist and educator. His authored publications are:

- Radiology for FRCR and MRCP 111 Cases
- Neuroradiology for FRCR and MRCP 111 Cases
- Pediatric Radiology Case Report 111 Common Cases
- Atlas of Pediatric Radiology 200 Common Cases
- Atlas of Neuroradiology 200 Common Cases

Those publications were very successful and were enthusiastically welcomed by candidates appearing for Royal College Examinations. Like all previous publications, the current “Abdominal-Pelvic Imaging” will no doubt be another exceptional one. This book will not only be extremely helpful for residents, but also for referring physicians and practicing radiologists internationally.

Dedication

To

All the people of my hometown, El-Méghaier, for their love and support.

Ammar Haouimi

To

My wife for her endless support.
My children: Imad, Ataf, Afaf, Souad, Amira; and my daughter in-law, Asma.
My adorable grandchildren, Dora and Ahmed.

Rabah Bouguelaa

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everything to me. Thank you for your patience, enthusiasm and support.
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Ammar Haouimi

I would like to pay special thanks and appreciation to the many people who offered help and support at various stages in
my life.
A special thanks to my colleague Doctor Ammar Haouimi for his patience, help and collaboration, without him this book may not have been completed.
Finally, I want to thank my family members for their vital support and love. Without them I could never have achieve my goals.

Rabah Bouguelaa

Contributors

Nassim BARCHICHE. MD
Consultant Radiologist
Centre D'imagerie Médicale Dr. Lekhal M
Blida, Algeria

Gamal HASSAN. MD, MRCP (UK)
Consultant Physician
Ohud Hospital
Medinah, KSA

Chelia BOUKAABA. MD
Consultant Radiologist
Centre D'imagerie Médicale Aurès
Batna, Algeria

Amine RAMDANI. MD
Consultant Radiologist
Centre D'imagerie Médicale Aurès Batna, Algeria

Zine-eddine BOUDIAF. MD
Consultant Radiologist
CHU Constantine, Algeria

Fouzi BALA. MD
Consultant Interventional Neuro-radiologist
Roger Salengro Hospital
Lille, France

Shahid HUSSEIN. MD
Consultant Radiologist
Ohud Hospital Medinah, KSA

Foreword

Reading the latest book of Dr Ammar Haouimi arouses in me two feelings, an immeasurable pride and frustration. Pride, because my friend Ammar is a regular in the exploits he has obviously taken taste. He has published several landmark works, generously compiling the fruits of his great and long experience as a radiologist consultant (France) and the head of radiology department in different hospitals (Madinah, KSA). The latest book he has just made available to the medical community shows if it was necessary that he has lost none of his wit and that a liberal activity can be as prolific when it is driven by the concern to satisfy his patient while continuing to progress by enriching himself intellectually. This book is an offering for all imagers and clinicians. He reviews, in a didactic style, the most frequent situations with the rarest diseases. The exceptional quality of the iconography even suggests that if imaging is an art, it is nonetheless accessible to clinicians.

I also feel frustrated reading this book because I realize, again, that many skills are underestimated or even ignored at home. Dr Haouimi has the calibre of a great pedagogue and the expertise of an excellent imager to whom everyone would like to confide. The absence of bridges between the different modes of practice of medicine unfortunately deprives the learner of graduation or post-graduation of this knowledge. My frustration borders anger when we know that it publishes in English and that its place should be in the amphitheatre and conference rooms.

Dr Ammar Haouimi has always been available, affable, of great morality, endowed with a keen sense of analysis and synthesis naturally coupled with a great ability of listening and patience. This has not been without giving him a perfect or even eclectic knowledge of his professional environment and a great capacity for expertise.

My friend, Dr Ammar Haouimi, is a school, a real school, because he knows how to take and adsorb the best of each to give it to all. I had the pleasure and the chance to read his many books and the happiness of being part of his friends.

Professor Abdelkrim Berrah
Head and Chairman Department of Internal Medicine Bab El Oued University Hospital
Algiers ALGERIA

Preface

Recent growth in the field of diagnostic radiology has dramatically increased the complexity of this field. Diagnostic imaging has become widely available and plays an increasing role in clinical diagnosis and therapy. However, in most practices, miscommunication between radiologists and other physicians occurs frequently mainly because physicians often are not completely familiar with the role of radiology in patient care.

Maybe we have an obsession for cases, but when we were resident in radiology, we loved to learn especially from cases, not only because they are short, exciting, and fun similar to a detective story in which the aim is to get to “the bottom” of the case, but also because, in the end, that’s what radiologists are faced with during their daily work.

The topics covered in the book represent the common and important diseases encountered in abdominal and pelvic imaging. The material presented for each case provides a thorough and comprehensive description of the disease entity enabling the radiologist or the clinician to develop a clear concept of the entity through the different imaging modalities that are present. We hope that will be useful for residents in radiology, radiologists and physicians.

What is interesting in this book is one case per page. The book can be used as a mean of rapid revision of a large number of cases in a short time or as a test of knowledge by masking the radiological description and diagnosis and trying by using the clinical data and radiological images to describe first, the pathology, then propose a diagnosis.

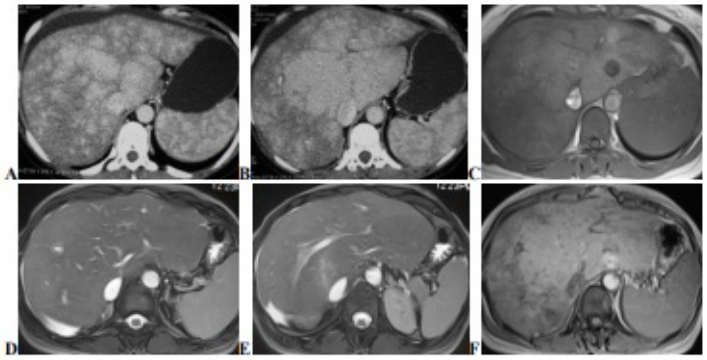
Ammar Haouimi
Rabah Bouguelaa

Case 1

Clinical Presentation

A 36-year-old woman with history of abdominal pain and mild abdominal distension. The liver was enlarged on clinical examination. The abdominal ultrasound revealed an enlarged heterogeneous liver.

Radiological Findings



Enhanced CT scan, axial (A, B) and MR scan, axial T1 (C), axial T2 fat saturation (D, E) and post-contrast axial T1 (F) images. On CT images, the liver is enlarged with hypertrophied caudate lobe: mottled enhancement with prominent enhancement of the central liver and decreased enhancement of the liver periphery (nutmeg liver). The areas of decreased enhancement are due to decreased portal flow, hepatic congestion and ischemia. Non-visualisation of the hepatic veins. The MR sequences show the same appearances with homogeneous liver on T2 and enhancement of the central liver (the caudate lobe enhances normally as it has a separate draining vein directly into the inferior vena cava) with decreased signal intensity of the atrophied liver periphery. The IVC is patent. Note mild ascites.

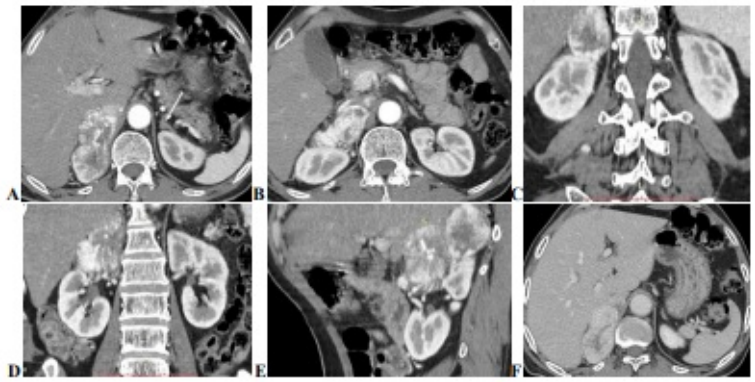
Diagnosis: Budd Chiari Syndrome.

Case 2

Clinical Presentation

A 61-year-old man known diabetic type 2 presented with 1-year history of paroxysmal attacks of palpitation, dizziness and headache. The physical examination was normal except the blood pressure which was high during paroxysmal attack (systolic BP varies from 150 to 230 mmHg and diastolic BP varies from 110 to
140 mmHg). The routine laboratory investigations were within normal limits except the glycaemia at 200 mg/Dl. The serum catecholamine level was not done.

Radiological Findings



Enhanced abdominal CT scan, post-contrast arterial phase axial (A, B) / coronal and sagittal reconstruction (C, D, E) and post-contrast portal phase axial (F) images reveal a well-defined lobulated right suprarenal mass with intense and heterogeneous enhancement and prominent surrounding vessels on arterial phase and rapid washout on portal phase. Note the IVC is displaced anteriorly and the upper pole of the kidney posteriorly. The left adrenal gland appears normal in size and shape (arrow image A).

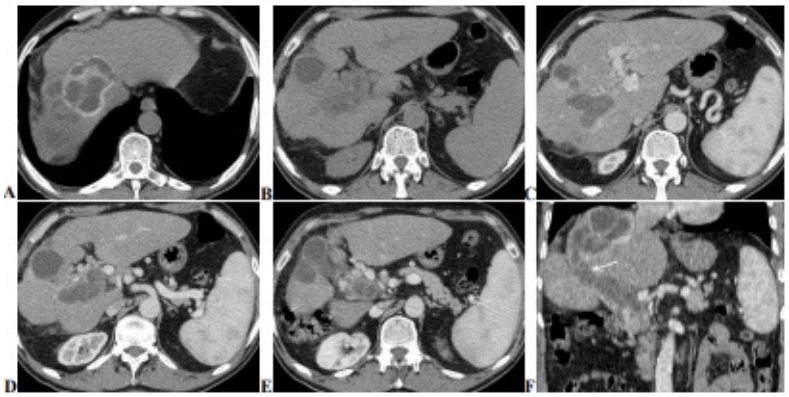
Diagnosis: Adrenal Pheochromocytoma

Case 3

Clinical Presentation

A 60-year-old man complaining of right upper quadrant pain with abdominal distension after meals. He had a history of surgery for hydatid cysts of the liver 10 years ago. The physical examination was normal except moderate splenomegaly. The routine laboratory investigations were within normal limits.

Radiological Findings



Pre-(A, B) and post-contrast (C, D, E) abdominal CT scan with coronal reconstruction (F) images showing a dysmorphic liver (past history of surgery for hydatid cysts) with hydatid cysts located in the segments, VIII/VII (CE4 and CE3A, WHO classification) and V (CE3 A, WHO classification). The portal vein and its right branch are dilated, containing germinative membranes and other cyst contents with evidence of fistulous tract between the hydatid cyst located in the segment VIII and dilated right branch of portal vein (arrow in F). Note the presence of tortuous venous structures around the thrombosed portal vein indicating portal cavernoma. The spleen was moderately enlarged with dilated splenic vein (extra-hepatic portal hypertension).

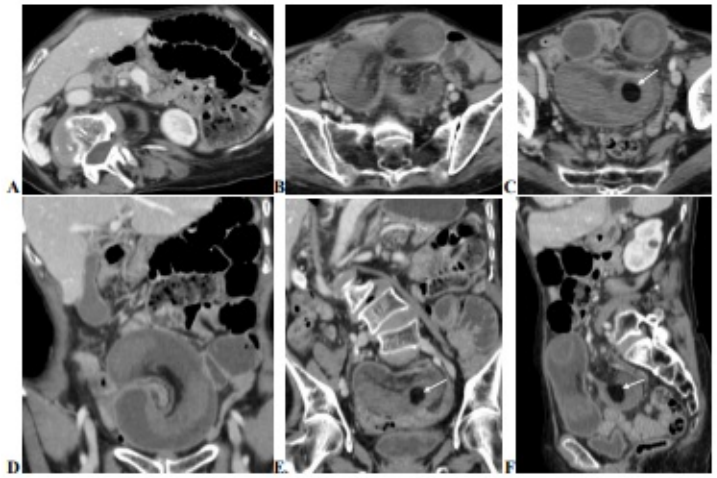
Diagnosis: Hepatic Hydatid Cyst ruptured into the Portal Vein

Case 4

Clinical Presentation

A 40-year-old man presented with acute onset of severe lower abdominal pain, nausea and vomiting with a palpable mid-pelvic mass.

Radiological Findings



Enhanced Abdominal CT scan, axial (A, B, C) with coronal / sagittal reconstruction (D, E, F) images showing a sausage-shaped mid-pelvic mass with central area containing mesenteric fat and vessels indicating intussusception. Distal within this mass there is a well-defined fatty-density lesion (arrow images, C, E and F) representing a lipoma. Note proximal small bowel dilatation.

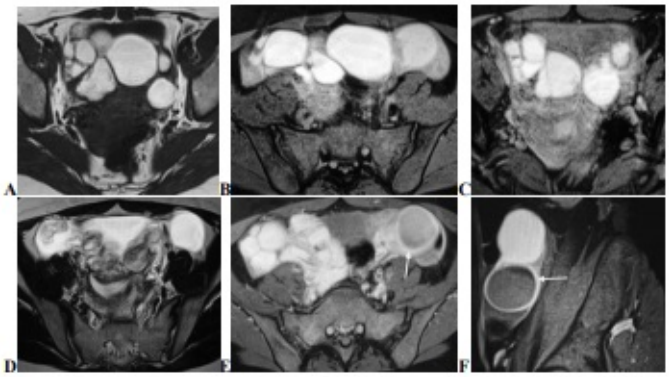
Diagnosis: Ileo-ileal Intussusception Secondary to a Lipoma

Case 5

Clinical Presentation

A 35-year-old woman, with history of dyspareunia and severe dysmenorrhoea for 5 years.

Radiological Findings



MR scan, axial T1 (A), T1 fat saturation (B, C), axial T2 (D) and post-contrast axial / sagittal T1 fat saturation (E, F) images showing multiple and bilateral well-circumscribed contiguous ovarian cystic lesions of high signal intensity on T1 and T1 fat saturation, low signal intensity on T2 with no peripheral enhancement after gadolinium administration (endometriomas). Both ovaries are closed up due to interovarian adhesions (Kissing ovaries). Note that the left ovary shows also another cystic lesion of high signal intensity on T1 and T2 with peripheral regular enhancement after gadolinium administration (haemorrhagic cyst, arrow in E and F). The uterus was normal.

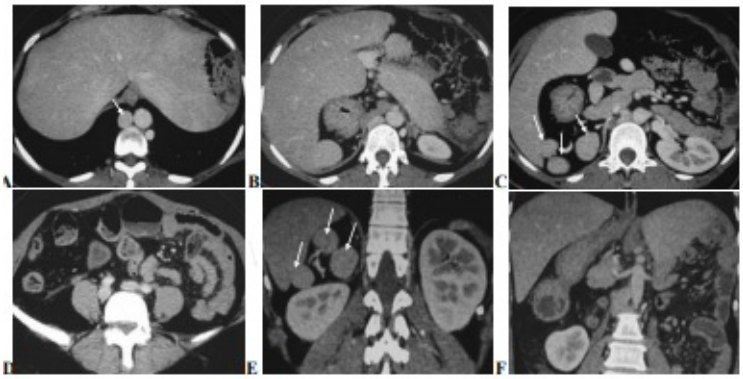
Diagnosis: Bilateral Ovarian Endometriomas with Coexisting Left Haemorrhagic Cyst

Case 6

Clinical Presentation

A 46-year-old woman presented with an abdominal discomfort. An abdominal ultrasound revealed a midline liver with no spleen seen in the left hypochondrium. No significant medical or surgical history.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B, C, D) with coronal reformatted (E, F) images. The liver is in midline (or bridging liver) with stomach on the right side. Three splenules are seen on the right below the liver (arrows in C and E) with no splenic structure seen in the left hypochondrium. Note an interruption of the inferior vena cava with azygous continuation of the IVC (arrow in A). The head and the corporeo-caudal region of the pancreas are on the right, giving the appearance of a lying V (image C) with Preduodenal position of the portal vein. The duodenojejunal junction does not cross the midline; it should be located on the same side of the body as the stomach and approximately at the level of the duodenal bulb, indicating associated intestinal malrotation.

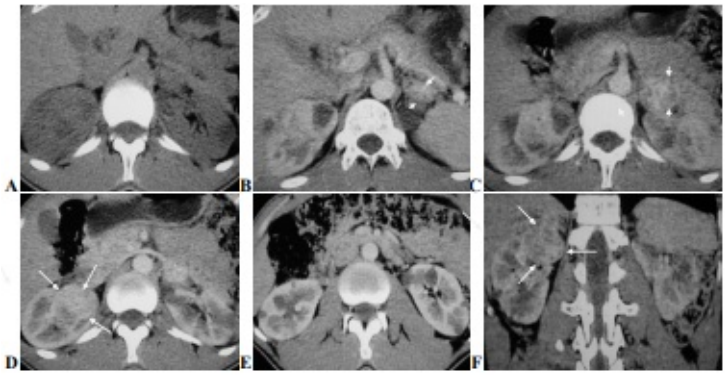
Diagnosis: Heterotaxy-Polysplenia-Azygous Continuation of IVC

Case 7

Clinical Presentation

A 37-year-old man operated 2 years ago for cerebellar tumour presented with headache, tachycardia, decreased level of consciousness and uncontrolled high blood pressure.

Radiological Findings



Pre-(A) and post-contrast (B, C, D, E) abdominal CT scan with coronal reformatted (F) images demonstrate bilateral multiple low-attenuation renal cysts of various size. The right kidney shows a solid mass of heterogeneous enhancement (arrows in D and F). Note also the presence of a solid heterogeneously enhancing mass of the left adrenal gland (arrowheads in B and C). The combination of bilateral renal cysts, solid renal mass(es) (renal cell carcinoma) and adrenal mass(es) (pheochromocytoma) is highly suggestive of Von Hippel Lindau disease.

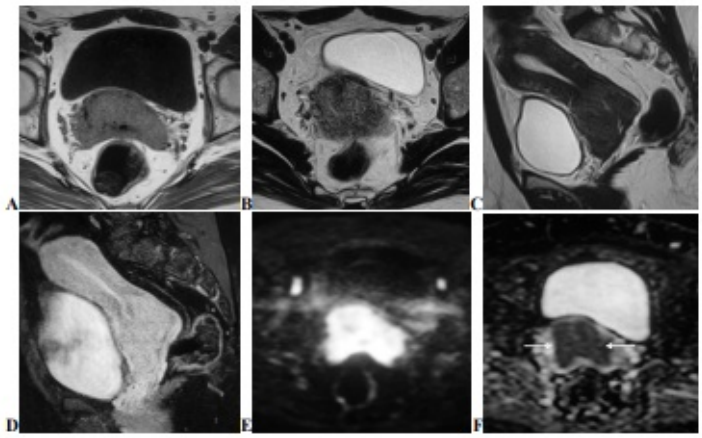
Diagnosis: Von Hippel Lindau Disease

Case 8

Clinical Presentation

A 54-year-old woman with history of neglected post-menopausal bleeding.

Radiological Findings



MR scan, pre-contrast axial T1 (A), axial / sagittal T2 (B, C), post-contrast sagittal T1 fat saturation (D) and DWI /ADC (E, F) images showing a large cervical mass, isointense to the myometrium on T1 and T2 with significant enhancement after gadolinium administration. This mass appears as a circumferential thickening mainly of the anterior cervical wall with exophytic component protruding into the upper vagina. The lower endometrium and myometrium are infiltrated with disruption of the stromal ring and extension into the parametrium. DWI clearly shows a well-defined hyperintensity mass in the cervical area with no invasion of the posterior bladder wall or anterior rectal wall. On the apparent diffusion coefficient (ADC) map, the tumour is hypointense (arrows). The ADC value within the mass was 0.72 × 10-3 mm2/s. There were no enlarged lymph nodes.

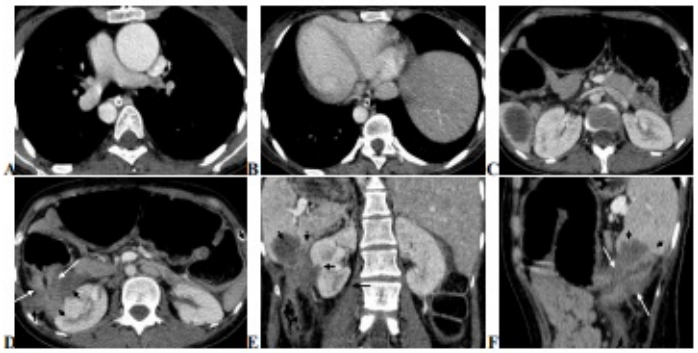
Diagnosis: Cervical Epidermoid Carcinoma (T2b N0 Mx in this case)

Case 9

Clinical Presentation

A 34-year-old woman, with no family history of situs inversus totalis, hereditary disease or colorectal cancer. She didn't know that she had situs inversus totalis. The patient presented with 2 years' history of abdominal pain in right upper quadrant, asthenia and weight loss. The physical examination was unremarkable except painful on palpation of the right abdomen.

Radiological Findings



Enhanced thoracoabdominal CT scan, axial (A, B, C, D) with coronal / sagittal reformatted (E, F) images show findings of situs inversus totalis: dextrocardia, aortic arch and pulmonary trunk to the right, liver in the left upper abdomen, spleen and great curvature of the stomach in the right upper position, cecum and appendix in the left lower abdomen, etc…There is an irregular wall thickening with luminal narrowing of the splenic flexure and pericolic fat infiltration (white arrows in D and F). Note the direct extension of the tumoural process to the spleen, kidney and adjacent abdominal wall (black arrowheads in D, E and F). TNM staging was T4bN1M0, stage IIIC.

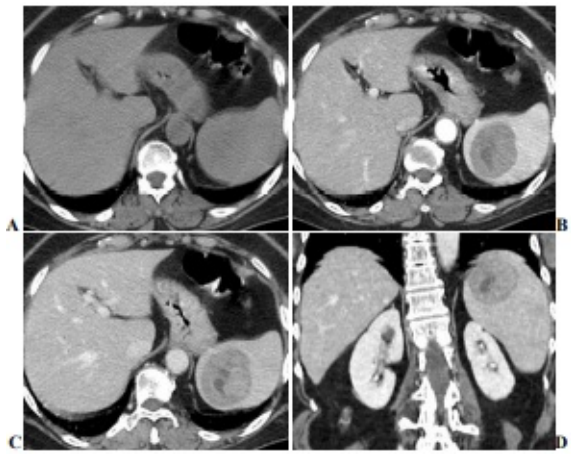
Diagnosis: Colonic Adenocarcinoma in patient with Situs Inversus Totalis

Case 10

Clinical Presentation

A 65-year-old woman presented with 6 months of abdominal discomfort. The physical examination was unremarkable and laboratory data were all within normal ranges. An abdominal ultrasonography was performed and showed a hypoechoic splenic lesion about 5 cm in size. Serum levels of CEA, CA153, and AFP were all within normal range.

Radiological Findings



Pre-(A) and post-contrast CT scan, axial arterial / portal phase (B, C) with coronal reconstruction (D) images showing a rounded well-defined splenic mass slightly hypodense on non-enhanced CT with moderate heterogeneous enhancement of the peripheral zone on portal phase and persistent hypodense central area (Fibrosis).

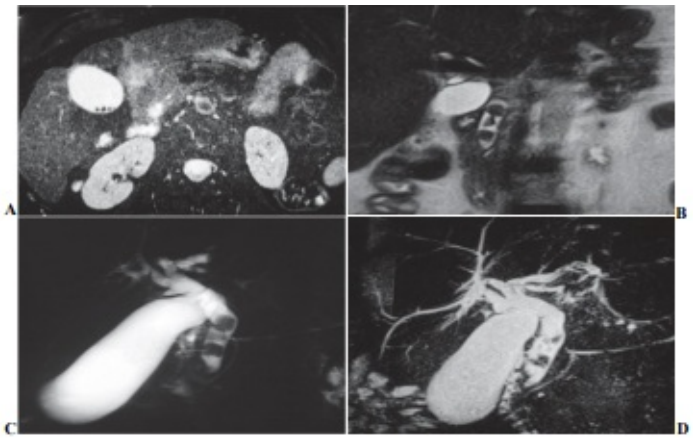
Diagnosis: Inflammatory Pseudotumour of Spleen

Case 11

Clinical Presentation

A 73-year-old woman presented with complaints of pain in the right upper abdomen, vomiting and jaundice of 3 weeks duration. Past history was suggestive of biliary colics of 3 years' duration but the patient was never hospitalised during this time.

Radiological Findings



MR scan, axial T2 fat saturation (A), coronal T2 (B) and 2D / 3D-MRCP (C, D) images. The gallbladder is distended with thin wall, containing numerous microlithiasis (less than 3 mm in diameter). Dilatation of the intrahepatic biliary ducts and CBD (14 mm in this case), containing three large stones (10/11/12 mm). The rest of the MR examination was unremarkable.

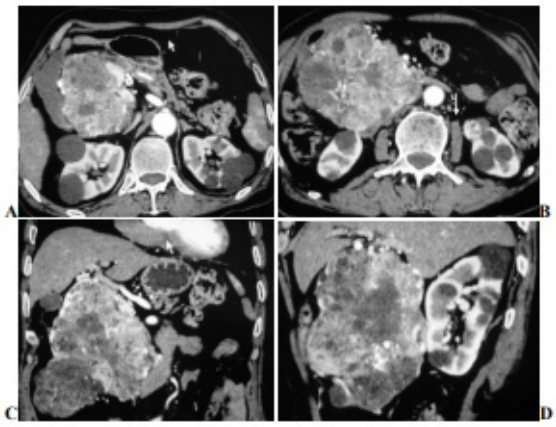
Diagnosis: Gallstones with Choledocholithiasis

Case 12

Clinical Presentation

An 88-year-old man presented with complaints of upper abdominal pain radiating to the back. The physical examination revealed a palpable mass in the right upper abdominal quadrant. An abdominal ultrasound was performed and a complex mass was noted at the head of the pancreas.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images demonstrate a large lobulated mass centred on the pancreatic head with double components, polymicrocystic and solid, the solid component appears highly vascularised with hypertrophied duodenopancreatic artery. The mesenteric vessels are laminated and displaced but remain permeable. The IHBD and CBD were not dilated. Note bilateral cortical renal cysts with small highly vascularised cortical mass of the left kidney (arrow in B), indicating metastasis or synchronous renal tumour.

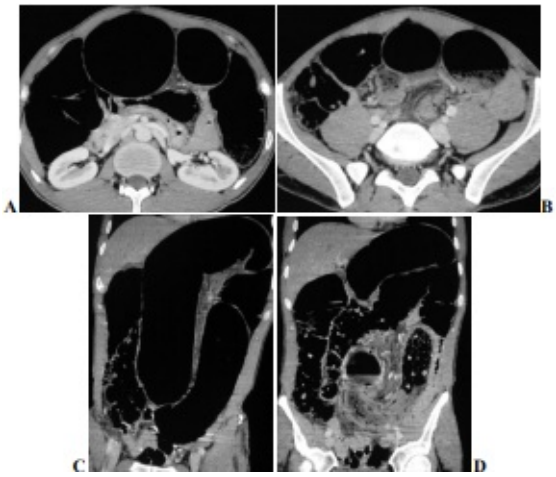
Diagnosis: Pancreatic Cystadenocarcinoma

Case 13

Clinical Presentation

A 38-year-old man with no medical history presented to the emergency room with postprandial abdominal cramps, lack of stool since 5 days and tenesmus. There was no history of smoking or alcohol abuse. The clinical examination revealed a diffusely distended and tender abdomen. Rectal examination showed a normal, empty ampulla.

Radiological Findings



Enhanced abdominopelvic CT scan, axial (A, B) with coronal reconstruction (C, D) images showed a greatly dilated sigmoid that almost fills the entire abdomen (sigmoid colon has a coffee bean sign on image C). Note the whirlpool sign of the twisted mesentery along with its vessels.

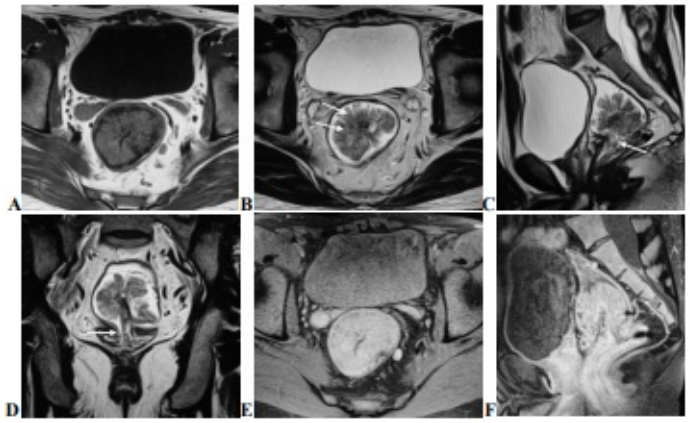
Diagnosis: Volvulus of Sigmoid Colon

Case 14

Clinical Presentation

A 52-year-old man with 8 months' history of secretory diarrhoea, rectal bleeding and anaemia (Hb at 6 g/dL). Digital rectal examination revealed soft to firm polypoid lesion in the rectum.

Radiological Findings



Pelvic MR scan, axial T1 (A), axial / sagittal / coronal T2 (B, C, D) and post- contrast axial / sagittal T1 fat saturation (E, F) images showing a pedunculated polypoid mass within the middle rectum of intermediate signal intensity on T1 and T2 with intense and heterogeneous enhancement after gadolinium administration. This polypoid mass shows a shaggy nodular contour giving the appearance of a cauliflower with visibility of the villi (double arrow, image B) and pedicle (arrow, images C and D). Note small left pararectal enhanced lymphadenopathy.

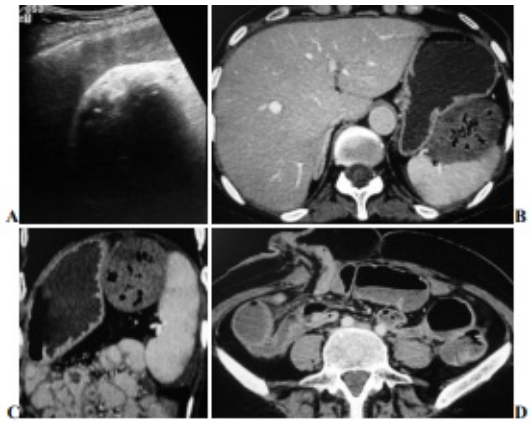
Diagnosis: Degenerate Tubulovillous Adenoma

Case 15

Clinical Presentation

A 50-year-old woman presented with left upper abdominal pain. She was operated 4 months ago for left colonic adenocarcinoma and had left hemicolectomy with right ileostomy.

Radiological Findings



Ultrasound section at the left hypochodrium (A) and enhanced CT scan, axial / coronal reconstruction (B, D, C) images. The ultrasound section shows an echogenic mass with posterior shadowing. The CT images show an ovoid hypodense structure containing air bubbles, located in the intergastro-splenic region. Note small bowel distension without any intestinal obstruction.

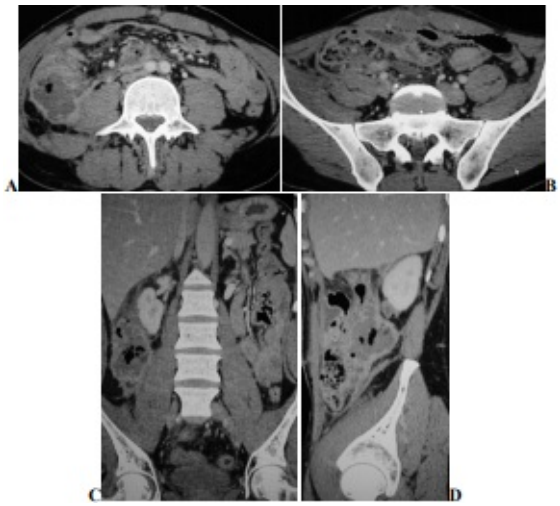
Diagnosis: Intergastro-splenic Textiloma (gossypiboma)

Case 16

Clinical Presentation

A 50-year-old man had appedicectomy 10 days ago for appendicular peritonitis presented with abdominal pain in the right iliac fossa with fever and hyperleukocytosis 25000 × 103/Ml.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images showing a retrocecal hypodense collection with mesenteric extension, containing air-fluid level with thick enhanced wall and inflammatory infiltration of the mesenteric fat.

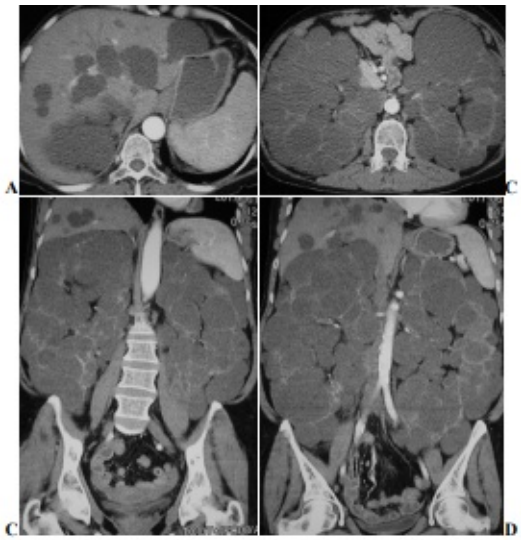
Diagnosis: Retrocecal Abscess

Case 17

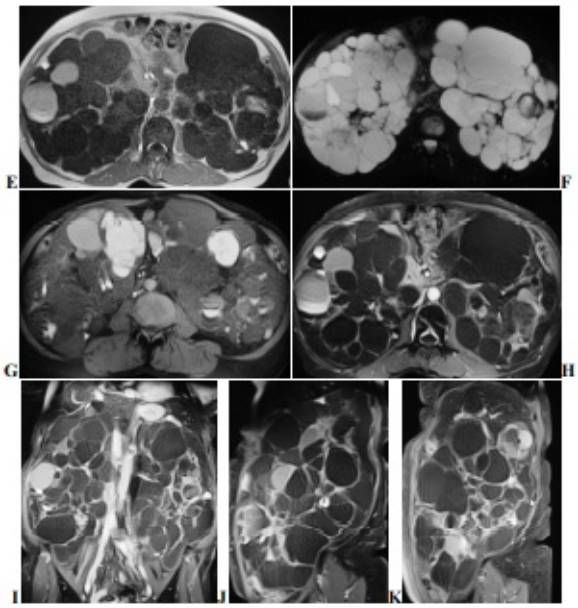
Clinical Presentation

A 58-year-old woman, known case of end-stage renal failure under haemodialysis since 4 years presented with abdominal pain and abdominal swelling.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal reconstruction (C, D) images demonstrate marked enlargement of both kidneys by innumerable cysts of various size, some of which are hyperdense (intracystic bleeding) with complete destruction of the cortical renal parenchyma. The liver also contains numerous cysts of various size.



continued same patient, MR scan, axial T1 in-phase (E), axial T2 fat saturation (F), pre-contrast axial T1 fat saturation (G) and post-contrast axial / coronal / right and left parasagittal T1 fat saturation (H, I, J, K) images. As seen on CT scan, both kidneys are enlarged with multiple cysts of low signal intensity on T1 and high signal intensity on T2. Some cysts demonstrate high signal intensity on T1 in-phase and T1 fat saturation and low signal intensity on T2 consistent with haemorrhagic cysts. Cysts are not enhanced after contrast administration (increased signal intensity on post-contrast T1 images may be observed in the delayed phase due to the diffusion of the contrast agent through the cystic wall rather than from typical contrast enhancement).

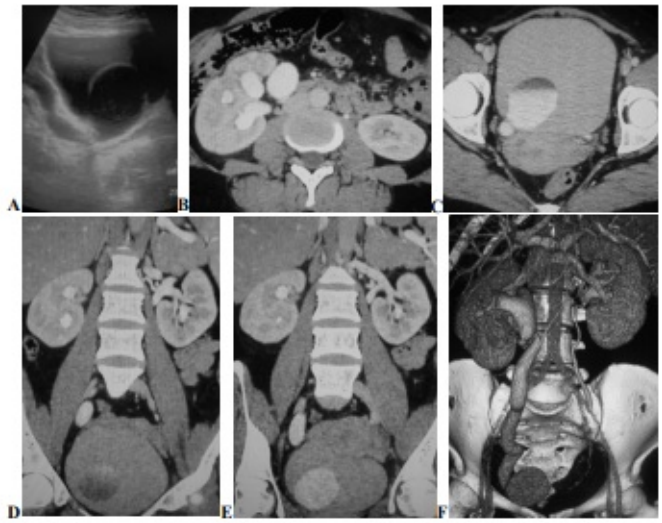
Diagnosis: Autosomal Dominant Polycystic Kidney Disease (ADPKD)

Case 18

Clinical Presentation

A 38-year-old woman complaining of recurrent right flank pain. She was not subjected to any illness or medical investigations in the past. However, she complained of frequent urination (pollakiuria) since few years.

Radiological Findings



Ultrasound transverse section at the pelvic region and CT urography, axial (B, C), coronal and 3D reconstruction (D, E, F) images. The ultrasound image shows a cystic structure within the urinary bladder in continuity with a dilated right ureter. The CT urography images show dilated single right collecting system well-visualised on 3D (image F). Note the progressive contrast filling of the intravesical cystic structure (ureterocele) from image D to image E. The left kidney and collecting system are normal.

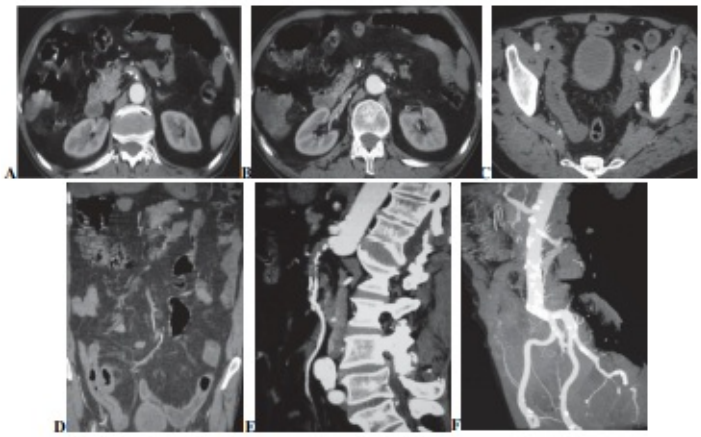
Diagnosis: Intravesical Orthotopic Ureterocele with Single Collecting System

Case 19

Clinical Presentation

A 77-year-old man complaining of recurrent severe upper abdominal pain. His past medical records included myocardial infarction, type 2 diabetes mellitus and hypertension. On admission, his blood pressure was 243/115 mmHg. Physical examination of his abdomen revealed tenderness over the upper abdomen without any signs of peritonitis.

Radiological Findings



Enhanced abdominopelvic CT scan, axial (A, B, C) with coronal reconstruction (E) and CT angiography (F, G) images demonstrate a complete proximal postostial thrombosis of the superior mesenteric artery (SMA) with parietal calcifications. The distal portion of SMA is opacified by collateral supply from the inferior mesenteric artery (IMA). Note the distal jejunal and proximal ileal loops show thickened non-enhanced wall. No pneumatosis intestinalis, portal venous gas nor free fluid in the peritoneal cavity.

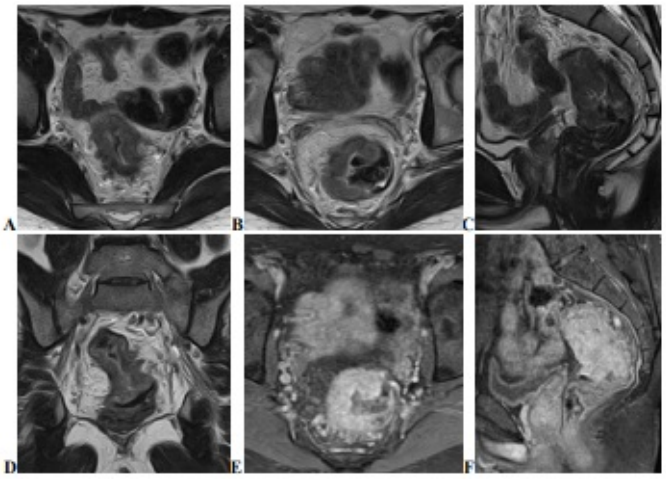
Diagnosis: Acute SMA Occlusion with Entero-mesenteric Ischemia
(acute thrombosis superimposed on atherosclerosis)

Case 20

Clinical Presentation

A 30-year-old man presented with an altered bowel habit and per-rectal bleeding.

Radiological Findings



Pelvic MR scan, axial T1 (A), axial / sagittal / coronal T2 (B, C, D) and post-contrast axial / sagittal T1 fat saturation (E, F) images showing a semi-annular partially obstructing mid-rectal lesion of intermediate signal intensity on T1 and T2 weighted images with heterogeneous enhancement after gadolinium administration. It is 6 cm long and distal edge is
5.4 cm from the anal margin. There is evidence of linear and nodular extension beyond the serosa into the perirectal fat with no involvement of the mesorectal fascia. Note small lymph nodes in the mesorectum.

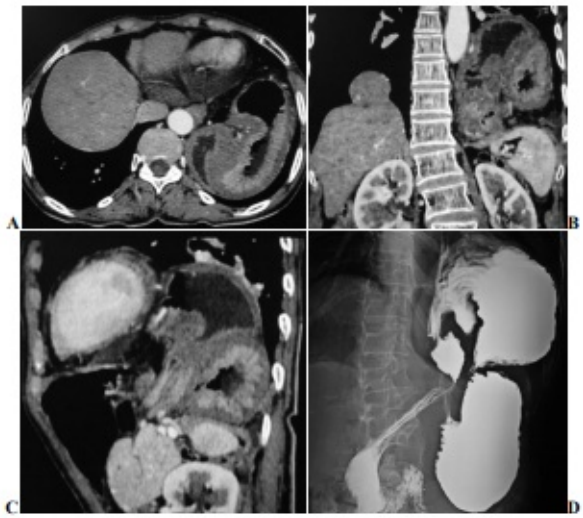
Diagnosis: Rectal Adenocarcinoma (stage T3N2Mx)

Case 21

Clinical Presentation

A 65-year-old man with history of recurrent epigastric pain, abdominal fullness and vomiting. An upright plain abdominal radiograph showed a double air-fluid level above and below the left hemidiaphragm with collapsed small bowel.

Radiological Findings



Enhanced Abdominal CT scan, axial (A) with coronal / sagittal reconstruction (B, C) and barium meal (D) images. The CT images show an ascension of part of body and antrum of stomach in the left hemithorax through a diaphragmatic defect (Hernia). The barium meal image shows a rotated stomach around its short axis from the lesser to greater curvature, giving an appearance of upside-down with an antropyloric region above the gastro- oesophageal junction.

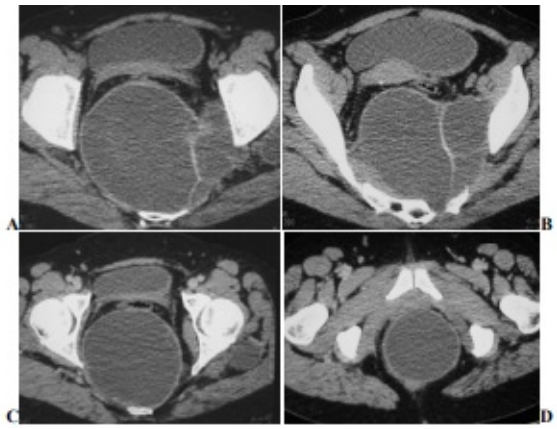
Diagnosis: Diaphragmatic Hernia Complicated of Chronic Mesentero-axial Volvulus of Stomach.

Case 22

Clinical Presentation

A 43-year-old woman with history of chronic backache radiating to the left lower limb. An ultrasound examination was performed and showed a large retro-uterine cystic mass.

Radiological Findings



Pre-(A) and post-contrast (B, C, D) pelvic CT scan images reveal a huge presacral retrouterine multicystic and lobulated mass with no enhancement seen after contrast administration, displacing the rectum, uterus and urinary bladder anteriorly. Note the left lateral extension between the obturator internus and gluteus maximus, compressing the sciatic nerve.

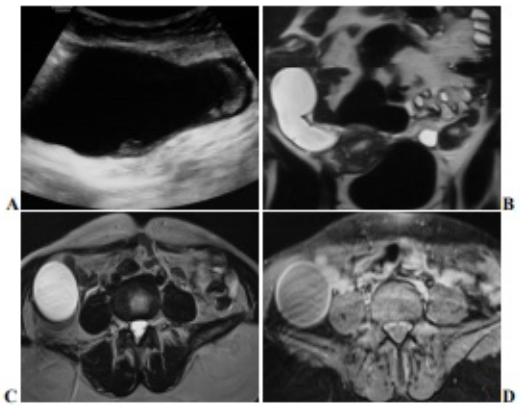
Diagnosis: Huge Presacral Retrorectal Hydatid Cyst

Case 23

Clinical Presentation

A 38-year-old woman was referred to the emergency department. Her complaints were pain in the right lower quadrant of the abdomen, nausea, and fever. The symptoms started 3 days prior. When palpating the lower right quadrant of the abdomen, the patient felt pain, muscles were moderately rigid, and rebound tenderness was noted. Body temperature was 37.5°C. Leucocytosis (11.4 × 109/L).

Radiological Findings



Ultrasound image of the right iliac fossa (A) and MR scan, coronal / Axial T2 (B, C) and post-contrast axial T1 fat-saturation (D) images. The ultrasound image shows a blind-ending cystic tubular, non-peristaltic, non-compressible structure with internal ring-like echoes noted within the lesion. On MR images, it extends from cecum and appears of low signal intensity on T1 and high signal intensity on T2 with thin and regular enhanced wall.

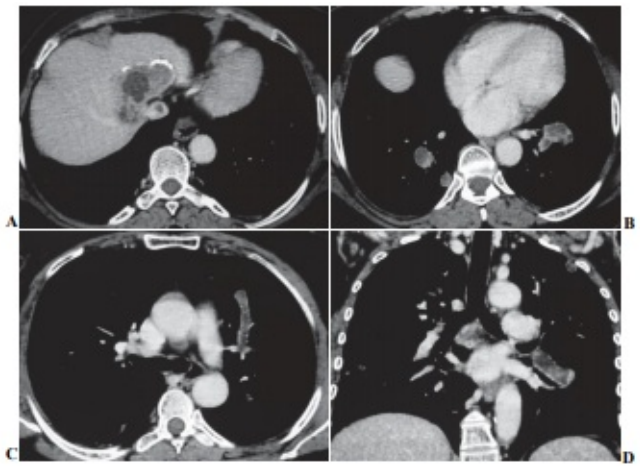
Diagnosis: Appendiceal Mucocele

Case 24

Clinical Presentation

A 62-year-old woman, referred for chest CT scan with symptoms of chest pain and dyspnoea at rest. There was no history of cardiovascular disease. The physical examination was unremarkable. The ECG demonstrated a sinus tachycardia. She had a hydatid cyst in the liver known since 3 years, but the patient refused surgery.

Radiological Findings



Enhanced CT scan, axial (A, B, C) and coronal reconstruction (D) images showing a complex heterogeneous cystic lesion with partially calcified wall of the liver (segments IVa / VIII) and presence of hypodense material within the inferior vena cava (image A), corresponding to a hydatid cyst (as CE 4 cyst following the WHO classification or type IV of Gharbi classification) ruptured into the IVC. The other CT images show bilateral filling of the arterial pulmonary system by hypodense material (Pulmonary embolism).

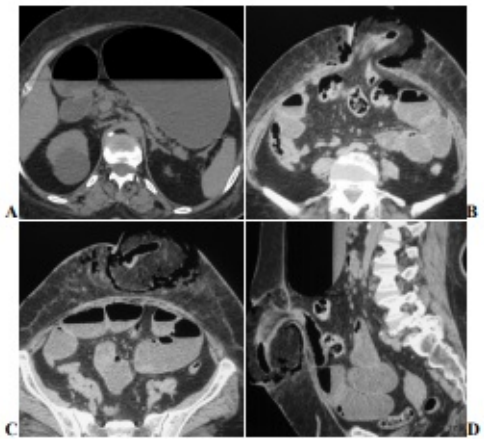
Diagnosis: Pulmonary Embolism Originating from a Hepatic Hydatid Cyst Ruptured into IVC

Case 25

Clinical Presentation

A 74-year-old woman presented with a 1-week history of severe abdominal pain and recurrent vomiting with a large hard and tender lump in anterior abdominal wall. She had a history of a long-standing reducible mass of the left paraumbilical region for over 4 years, which had become tense and irreducible 1 week earlier. She had no significant past medical history and was not on any medication.

Radiological Findings



Non-enhanced CT scan, axial (A, B, C) and sagittal reconstruction (D) images show an anterior abdominal wall defect (left paraumbilical) through which small bowel loops and omentum are protruding out of the abdominal cavity in a C-shaped configuration. The bowel loops involved in hernia show wall thickening. There is also gas and bubble around the sac and in the subcutaneous fatty tissue indicating necrotic perforated bowel loop. There is surrounding mesenteric fat stranding. The stomach, duodenum and bowel loops proximal to the hernia are distended with air-fluid levels and collapse of distal bowel loops. Note small right renal cyst.

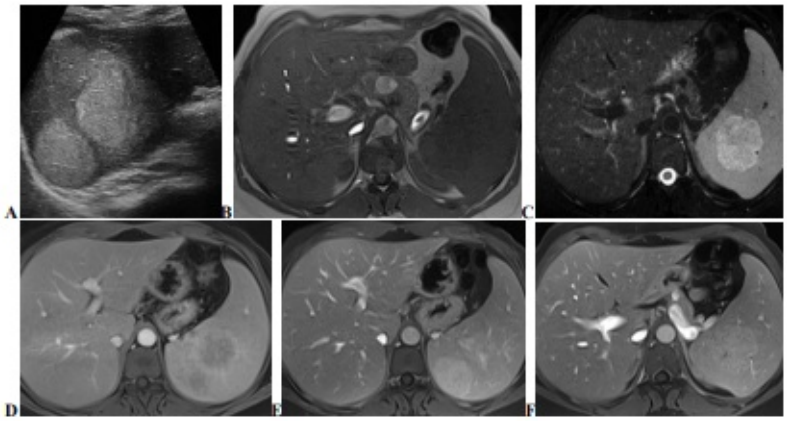
Diagnosis: Strangulated Umbilical Hernia with Bowel Necrosis

Case 26

Clinical Presentation

A 32-year-old woman presented with 3 weeks' history of left hypochondrial pain and enlarged spleen on clinical examination.

Radiological Findings



Ultrasound longitudinal section at the left hypochondrium (A), MR scan axial T1 (B), T2 fat saturation (C), post-contrast dynamic (D) and delayed post-contrast T1 fat saturation (E, F) images. The ultrasound section shows an enlarged spleen with two well-circumscribed hyperechoic homogeneous lesions, which appear on MR scan of low T1, high T2 with progressive and centripetal enhancement on dynamic sequence (D) and uniform enhancement at delayed imaging (E, F).

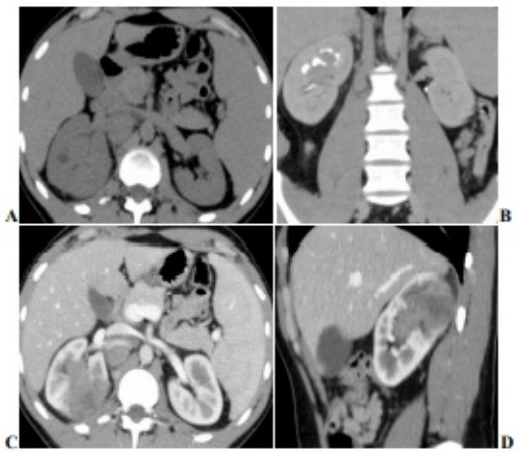
Diagnosis: Splenic Haemangiomas

Case 27

Clinical Presentation

A 48 year-old man, presented with 2 months history of right flank pain and macroscopic hematuria. No prior past medical history.

Radiological Findings



Pre-(A, B) and post-contrast (C, D) abdominal CT scan images. The non-enhanced CT images show an isodense right renal mass with foci of calcification and heterogeneous enhancement with central area of necrosis on enhanced CT images. Note an extension to the renal sinus with perinephric fat invasion and enlarged retroperitoneal lymph nodes around the renal vessels. The IVC and right renal vein were patent. No adrenal mass was seen.

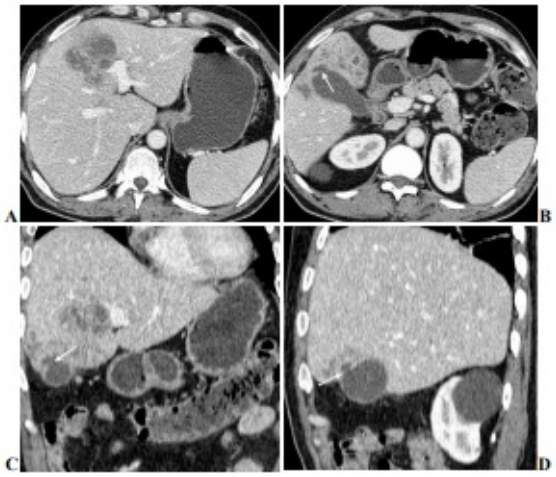
Diagnosis: Renal Cell Carcinoma

Case 28

Clinical Presentation

A 40-year-old man with 1-month history of right upper quadrant pain, intermittent fever, anorexia and general malaise. An abdominal ultrasound was performed and showed a complex hypoechoic mass of the liver (not shown).

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images. Within the segments IV and V of the liver, there is a lobulated multiloculated low-density lesion with relatively well- defined margin and thin enhancing wall. This lesion appears to be contiguous with gallbladder lumen which shows a focal perforation (arrow images B, C and D), thick enhanced wall and pericholecystic fat stranding. No definite gallstone seen. The appearance is most in keeping with hepatic abscess related to previous gallbladder perforation.

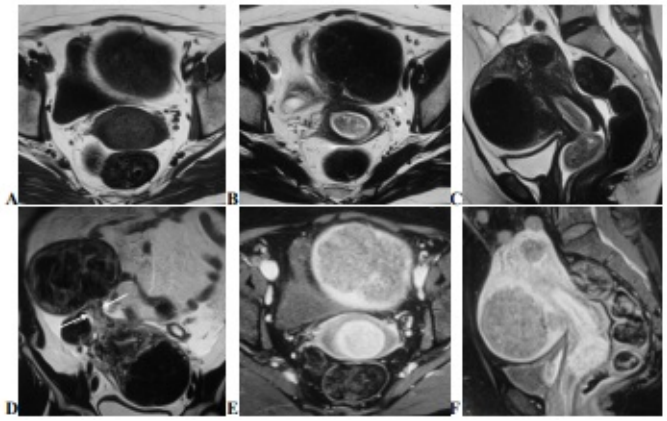
Diagnosis: Perforated Acute Cholecystitis with secondary Liver Abscess

Case 29

Clinical Presentation

A 51-year-old unmarried patient complaining of pelvic pressure and frequent urination with episodes of vaginal bleeding. The physical examination revealed palpable masses.

Radiological Findings



MR scan, pre-contrast axial T1 (A), axial / sagittal / coronal T2 (B, C, D) and post- contrast axial / sagittal T1 fat saturation (E, F) images demonstrate multiple varying size and well-demarcated intramural uterine lesions of intermediate signal intensity on T1, low signal intensity on T2 with mild heterogeneous enhancement after gadolinium administration. The largest lesion is of subserosal location with thin stalk (arrows in D) connecting the lesion with the upper right body of the uterus. Note also the presence of another pedunculated mass of the uterine cavity arising from the fundal region with a slender pedicle, prolapsing into the vagina via a distended endocervical canal.

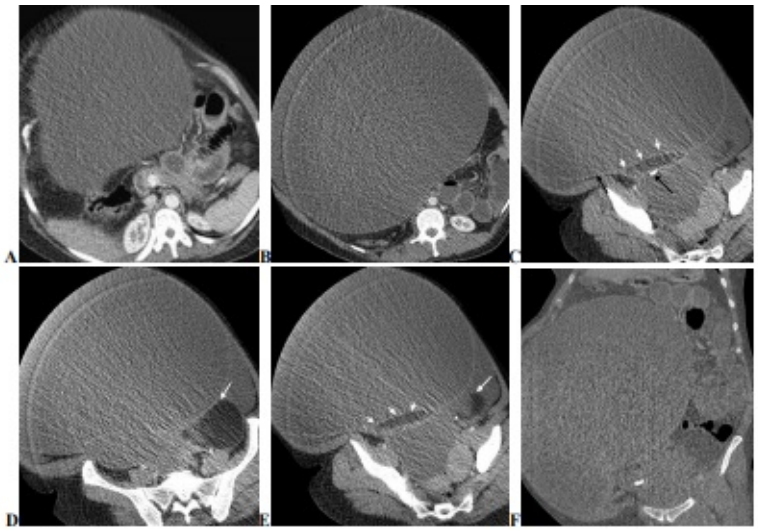
Diagnosis: Coexistence of Pedunculated Subserosal, Submucosal and Intramural Leiomyomas

Case 30

Clinical Presentation

A 51-year-old female patient presented with huge abdominal distension and constipation. An abdominal ultrasound was performed and revealed a large abdominopelvic cystic mass.

Radiological Findings



Enhanced abdominopelvic CT scan, axial (A, B, C, D, E) and coronal reconstructed (F) images showing a large well-encapsulated right abdominopelvic complex cystic lesion (50 cm) arising from the right ovary with three components, cystic (predominant), fatty (arrowheads in C and E) and foci of calcification (black arrow in C). Another similar cystic lesion (11 cm) with predominately fatty component arising from the left ovary (arrow in D and E). Note moderate ascites.

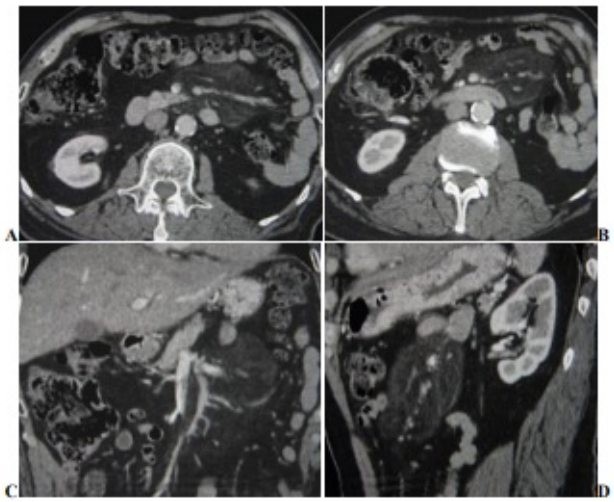
Diagnosis: Giant Ovarian Dermoid Cysts

Case 31

Clinical Presentation

A 78-year-old man with history of abdominal pain and altered bowel habits.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reformatted (C, D) images showing a well-circumscribed mesenteric, inhomogeneous fatty mass displaying higher attenuation than normal retroperitoneal fat, extending from mesenteric root toward left abdomen and surrounds mesenteric vessels. No mesenteric enlarged lymph nodes seen.

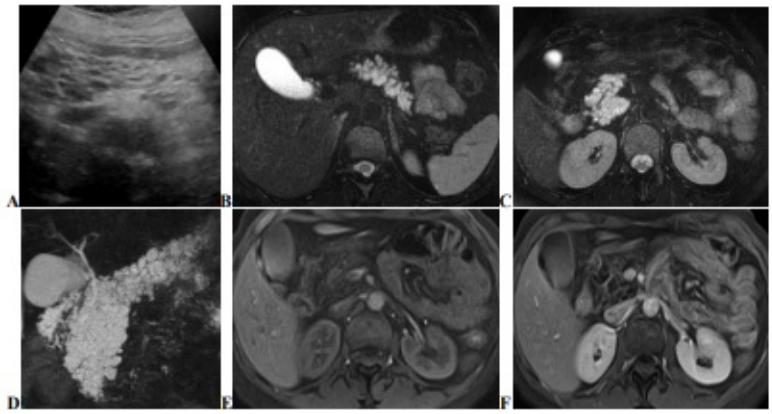
Diagnosis: Mesenteric Panniculitis

Case 32

Clinical Presentation

A 43-year-old woman presented with a painless epigastric lump that had progressively grown over 8 years to a size of 10 x 9x 2 cm. She complained of early satiety, severe loss of appetite, and a 7-kg weight loss. She was recently diagnosed with diabetes type 2. Brain CT was normal, and no family history of Von Hippel Lindau disease was reported.

Radiological Findings



Abdominal Ultrasound transverse section at epigastric region (A), and MR scan, axial T2 fat saturation (B, C), 3D-MRCP (D) , pre-and post-contrast axial T1 fat saturation (E, F) images. The ultrasound section shows a moderately enlarged pancreas with multiple microcystic lesions. The MR images show innumerable cystic lesions of variable sizes (up to 15 mm) diffusely involving the pancreas, almost completely replacing the parenchyma and appear hypointense on T1, hyperintense on T2 with minimal enhancement of septa after intravenous contrast medium administration. On 3D-MRCP these cystic lesions have a “bunch of grapes” pattern. There was no evidence of concomitant polycystic kidney or liver disease.

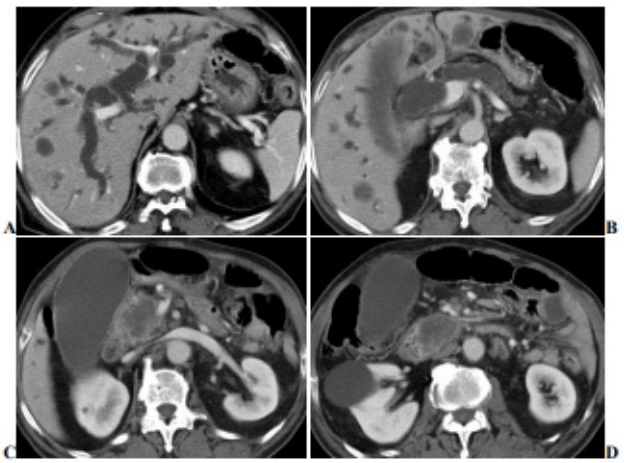
Diagnosis: Isolated Polycystic Disease of the Pancreas

Case 33

Clinical Presentation

A 74-year-old man, admitted for obstructive jaundice, upper abdominal pain, nausea, vomiting, loss of appetite and weight loss.

Radiological Findings



Enhanced abdominal CT scan images showing a distended gallbladder with dilated IHBD and CBD, as well as the pancreatic duct with atrophied corporeocaudal segment of pancreas. Heterogeneously enhancing mass of the pancreatic head with involvement of the lateral wall of the SMV and remaining distant from the SMA (image C). Note small enlarged mesenteric lymph nodes (image D). The liver shows numerous hypodense lesions of various size disseminated in both lobes (metastases).

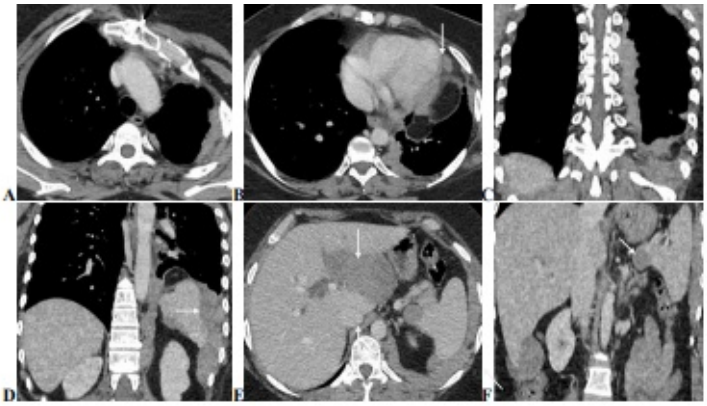
Diagnosis: Pancreatic Adenocarcinoma with Liver Metastases (Stage IV / T4N1M1)

Case 34

Clinical Presentation

A 37-year-old woman, operated 3 years ago for mediastinal thymoma. Below is the follow-up CT scan.

Radiological Findings



Enhanced thoracoabdominal CT scan, axial (A, B, E) with coronal reconstruction (C, D, F) images showing homogeneously enhancing nodular pleural thickening involving the mediastinal and costal pleura with volume-loss changes in left hemithorax. A small soft tissue nodule is seen at the left cardiophrenic angle, highly suggestive of pericardial metastasis (arrow in B). Note a transdiaphragmatic extension of the pleural thickening causing scalloping of the splenic surface (arrow in D). Three peritoneal masses are seen, one in contact with the spleen, one around the segment VI of the liver and one under the left lobe of the liver, compressing the CHD with dilated IHBD (arrows in E and F).

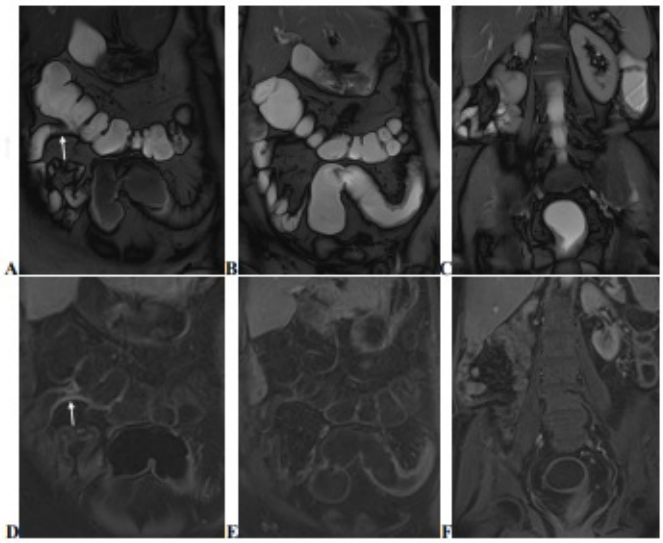
Diagnosis: Pleural, Pericardial, diaphragmatic and Peritoneal Metastases from Malignant Mediastinal Thymoma

Case 35

Clinical Presentation

A 56-year-old woman presented with 2 weeks' history of diarrhoea. She had a right hemicolectomy with resection of 15 cm from the ileum and termino-lateral anastomosis 16 years ago for inflammatory bowel disease.

Radiological Findings



MR Enterography, coronal T2-SSFP (A, B, C) / fat-suppressed post-contrast T1 GE (D, E, F) images showing thickened wall with hyperenhancement of the neoterminal ileum at the termino-lateral ileo-colic anastomosis of about 5 cm (arrow in A and D). Thick-walled with hyperenhancement and loss of haustral markings of the rectosigmoid and descending colon up the splenic flexure with dilated perirectosigmoid vessels (comb sign). No intraabdominal phlegmon, abscesses or fistulae.

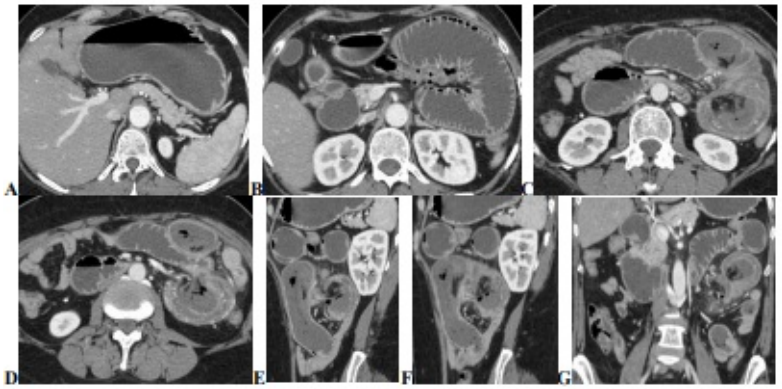
Diagnosis: Recurrence of Crohn's Disease after Surgery

Case 36

Clinical Presentation

A 58-year-old woman presented with signs of intestinal obstruction.

Radiological Finding



Enhanced abdominal CT scan, axial (A, B, C, D) with sagittal / coronal reformatted (E, F, G) images. Distended stomach, duodenum, and proximal jejunal loops with an abrupt obstruction of a jejunal loop giving a typical "tapering" appearance, the "beck" sign (in F and G) most probably due to an adhesional band (not visualised). Distal to the site of obstruction, a totally collapsed ileal loop is demonstrated, confirming the clinical hypothesis of a complete small bowel obstruction. Above this obstruction and within dilated jejunal loops, there is a long segment of intussusception (images C to G). The intussuscepien shows a segment of mildly thick-walled, slightly enhancing intussusceptum of invaginated proximal jejunum with mesenteric fat and vessels. The intussusceptum does not show any obvious mass lesion or lead-point.

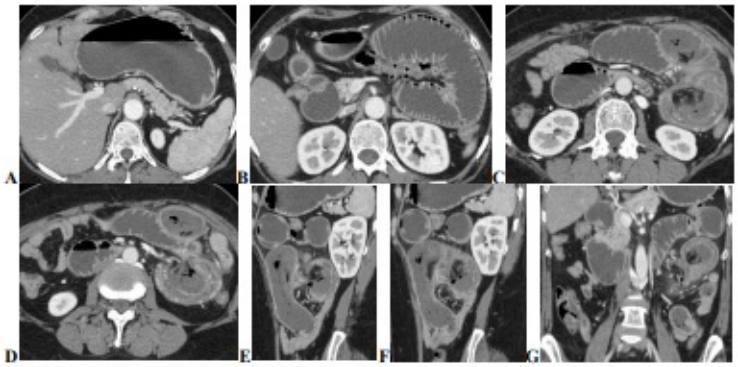
Diagnosis: Small Bowel Obstruction from Adhesive Bands complicated of Jejuno-jejunal Intussuception

Case 37

Clinical Presentation

A 64-year-old woman with 48 hours' history of acute onset of severe central epigastric pain (over 30-40 min), exacerbated by supine position and radiates through to the back. The pancreatic enzymes were not done.

Radiological Findings



Enhanced abdominal CT scan images show diffuse increased volume of the pancreas, with peripancreatic inflammatory changes, increased adipose tissue density in the mesenteric root and mild thickening of the left anterior pararenal fascia. Small collection is seen around the pancreatic head. The gallbladder showed few small stones (not shown) and CBD is dilated (10 mm) containing a small stone of 3 mm impacted in its distal portion (not shown). No alterations were observed in pancreatic impregnation pattern. Findings consistent with acute pancreatitis, Balthazar Grade D, without tomographic signs of glandular necrosis.

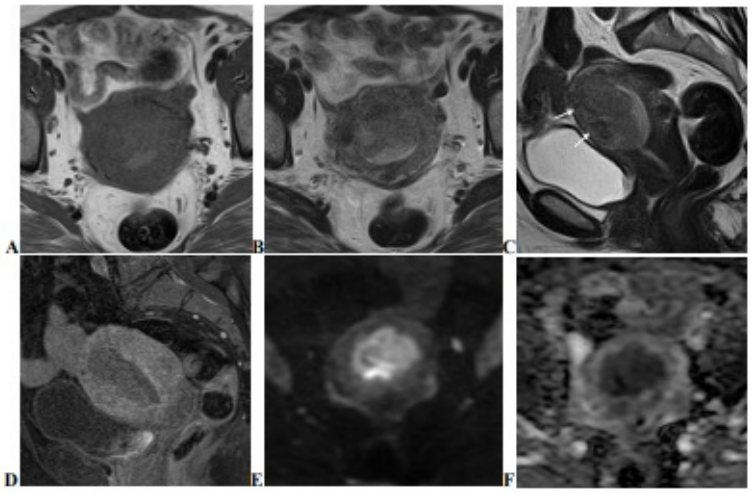
Diagnosis: Acute Pancreatitis Balthazar Grade D

Case 38

Clinical Presentation

A 59-year-old post-menopausal woman with irregular vaginal bleeding and dull abdominal pain.

Radiological Findings



MR scan, axial T1 (A), axial / sagittal T2 (B, C), fat-suppressed post-contrast sagittal T1 (D), DWI / ADC (E, F) images. There is a large mass within the endometrial cavity of intermediate signal intensity on T1, slightly high signal intensity on T2 as compared to the myometrium with typical bright enhancement of the myometrium and intermediate enhancement of the tumour (image D). On diffusion the tumour shows high signal with low ADC. There is invasion of the myometrium thickness up to the outer myometrium (arrows in C). Note the cervical stroma is intact.

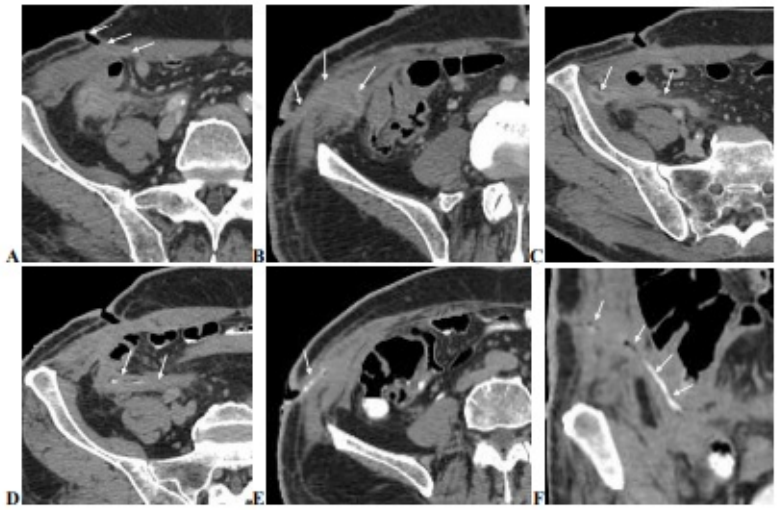
Diagnosis: Endometrial Carcinoma

Case 39

Clinical Presentation

A 63-year-old man with history of appendicectomy 3 weeks ago for ruptured retrocecal appendicitis with abscess formation presented with right lower quadrant pain, fever and cutaneous fistulae.

Radiological Findings



Enhanced abdominal CT scan (A, B, C) with upper GIT opacification and delayed axial cuts with coronal reconstruction (D, E, F) images demonstrating complex caecal fistula with at least three fistulous tracts. The first fistulous tract extending from the anterior caecal wall to the appendiceal scar at McBurney's point (arrows in A). The second fistulous tract is extended from the lateral caecal wall to the lateral abdominal wall well-opacified on delayed cuts (arrows on B, E, F). The third fistulous tract is in continuity with the previous one and extended to the iliac psoas muscle and mesenteric fat with adjacent mesenteric inflammatory stranding (arrows in C, D).

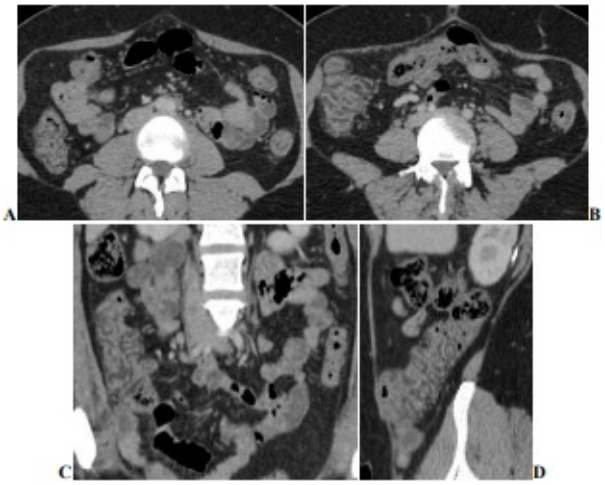
Diagnosis: Complex Caecal Fistula (Post-appendicectomy)

Case 40

Clinical Presentation

A 41-year-old woman presented with worsening diarrhoea of 15 days' duration, loss of appetite, and two episodes of haematemesis. There was no history of fever, melaena or vomiting. The clinical examination was unremarkable.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images showing diffuse circumferential thickening of the caecum and ascending colon with accordion-like appearance. The hyperaemic enhancing mucosa is stretched over markedly thickened submucosal folds, simulating the accordion sign. The transverse and left colon were preserved.

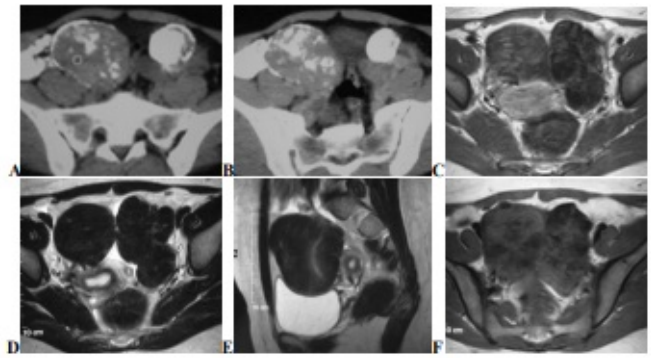
Diagnosis: Pseudomembranous Colitis

Case 41

Clinical Presentation

A 28-year-old woman with history of primary infertility of 4 years. She had history of irregular and heavy menses since the last 4 months. Her previous menses were regular with moderate bleeding. There was no history of anorexia, evening rise of temperature and weight loss. There was no significant past history of any medical or surgical illness. Primary physical examination revealed two mobile solid masses in the pelvic region, which couldn't be differentiated from uterine leiomyomas. An ultrasound was performed and revealed calcified pelvic masses.

Radiological Findings



Pre-(A) and post-contrast (B) pelvic CT scan and MR scan, axial T1 pre-(C) and post-contrast (F), axial / sagittal T2 (D, E) weighted images. The CT images demonstrate two partially calcified masses at the upper pelvic region (right larger than the left) with mild enhancement after contrast administration. On MR images these masses appear of intermediate to low signal intensity on T1, low signal intensity on T2 with mild enhancement and presenting an acute angle with the uterus on T2 images.

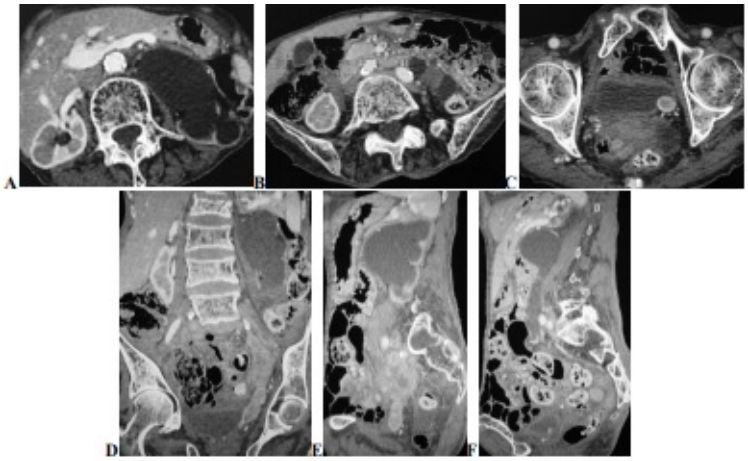
Diagnosis: Bilateral Ovarian Fibromas

Case 42

Clinical Presentation

A 91-year-old female patient with history of chronic left flank pain and neglected haematuria.

Radiological Findings



Enhanced abdominopelvic CT scan, axial (A, B, C) with coronal / sagittal reconstruction (D, E, F) images show a left hydronephrosis with marked thinning of the cortical renal parenchyma. The left ureter is dilated up to its distal segment with intraluminal polypoid masses filling its mid and lower third, extending up to the vesico-ureteric junction. Urinary bladder and renal pelvis were free. Note the right kidney and collecting system are normal.

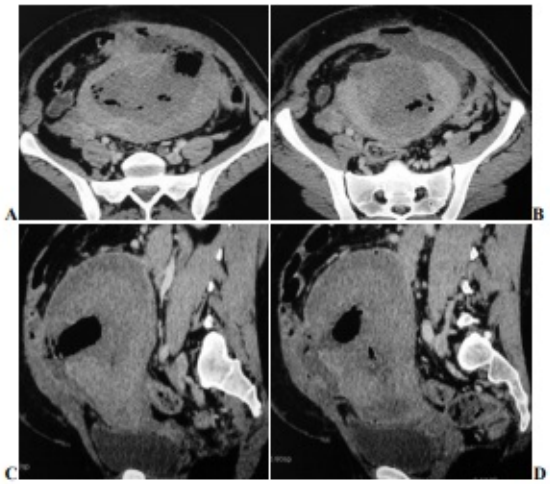
Diagnosis: Transitional Cell Carcinoma (Ureter)

Case 43

Clinical Presentation

A 26-year-old woman had caesarean section 12 days ago presented with distended abdomen, fever and WBC=30.000 elements/mm3.

Radiological Findings



Enhanced abdominopelvic CT scan (A, B) with sagittal reconstruction (C, D) images showing an enlarged uterus with mixed air- and fluid-filled collection of the uterine cavity, in continuity with another similar pre-uterine intraperitoneal collection through a defect of the anterior uterine wall. Note the extension of the intraperitoneal collection to the left rectus abdominis.

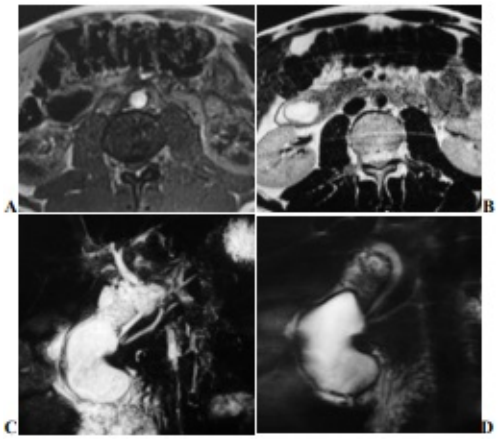
Diagnosis: Uterine Gas Gangrene with Pelvic Peritonitis Complicating
Uterine suture failure (breakdown of suture line)

Case 44

Clinical Presentation

A 38-year-old woman complaining of long-standing vague epigastric pain. An abdominal ultrasonography was performed, showing a cystic epigastric mass with a double-lined wall. MRI exam was also performed in order to define a diagnosis.

Radiological Findings



Abdominal MR scan, axial T1 (A), T2 (B) and MRCP (C, D) images revealed an oblong cystic structure within the lumen of the 2nd and proximal 3rd duodenum with thin and regular wall, not communicating with the duodenal lumen w h ic h is compressed and displaced laterally.

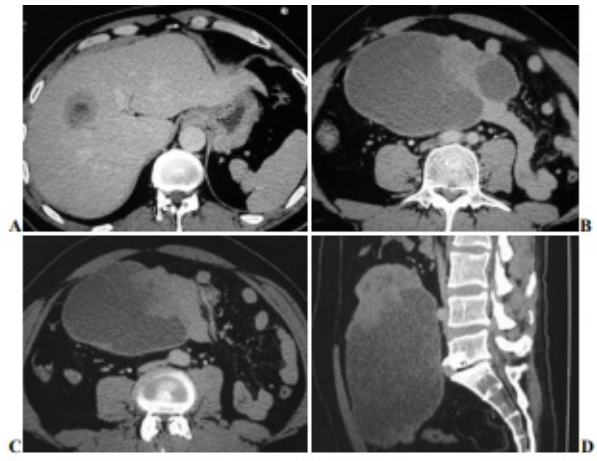
Diagnosis: Duodenal Duplication Cyst

Case 45

Clinical Presentation

A 50-year-old man with chronic abdominal pain. The ultrasound examination revealed a cystic abdominal mass.

Radiological Findings



Enhanced abdominal CT scan (A, B, C) with sagittal reconstruction (D) images reveal a large lobulated intramesenteric mass which has both solid and cystic/necrotic areas with no calcification, centred on the small bowel mesentery. The liver shows a low-attenuation lesion with peripheral rim or target-like enhancement.

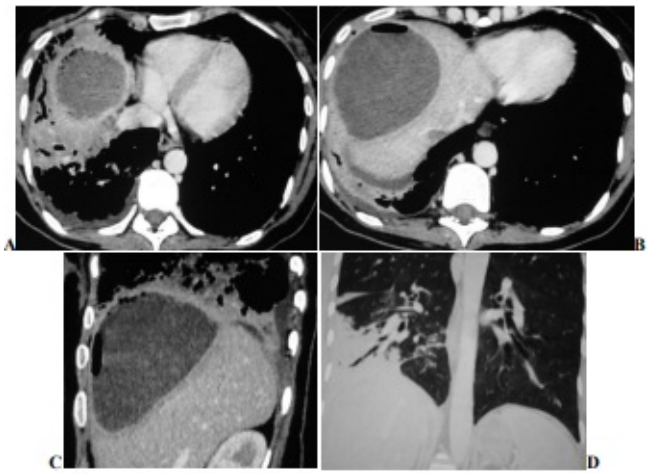
Diagnosis: Stromal Tumour with Liver Metastasis

Case 46

Clinical Presentation

A 35-year-old woman treated for hepatic abscess since 3 months without any improvement.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with sagittal and coronal reconstruction (C, D) images reveal a large well-circumscribed cystic mass of superficial location centred on the segment VIII of the liver, containing air-fluid level indicating bronchial fistulae with peripheral enhancement (infected cyst). The right hemidiaphragm shows a focal defect with alveolar consolidation of the middle lobe, right lung base and mild pleural effusion (pleuro-pneumonia).

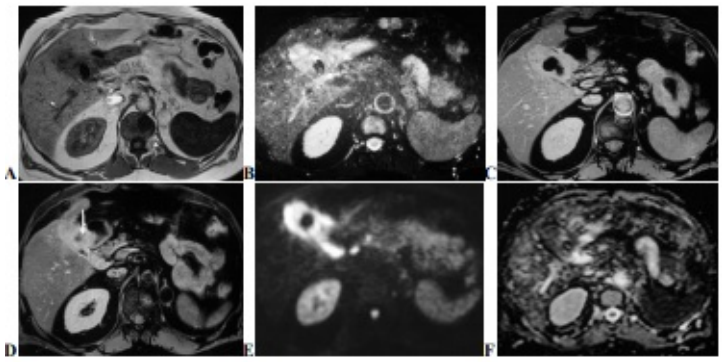
Diagnosis: Infected Hepatic Hydatid Cyst Ruptured into Bronchi

Case 47

Clinical Presentation

A 70-year-old man with history of intermittent right upper quadrant abdominal pain. The patient was admitted to the hospital due to suspected acute cholecystitis and had Murphy's sign on admission. The patient was being regularly treated for diabetes, hypertension. Routine laboratory evaluation were within normal limits. We regrettably did not check tumour markers.

Radiological Findings



Abdominal MR scan, axial T1 in-phase (A), axial T2 fat saturation (B), post-contrast axial T1 fat saturation (C, D) and DWI / ADC (E, F) images reveal a soft tissue mass with stones filling the lumen of gallbladder. The soft tissue mass appears of low signal on T1, high signal on T2 with intense and heterogeneous enhancement and restricted diffusion. The gallstones are of low signal on all sequences. Note the extension of the tumoural process to the 1st duodenal wall (arrow in D). No extension was seen to the adjacent hepatic segments (IV/V). Small oval left adrenal mass of high signal on T1 in-phase with signal loss on T1 fat saturation (images C, D), corresponding to an adrenal myelolipoma (incidentaloma).

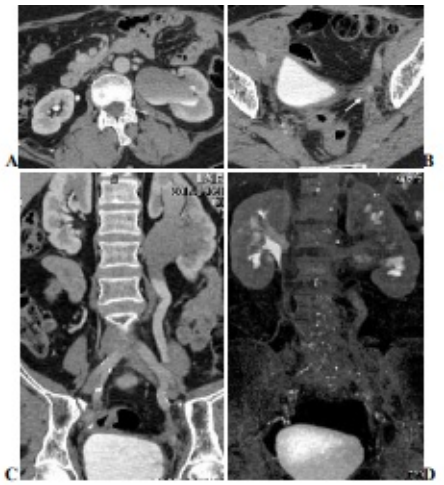
Diagnosis: Gallbladder Carcinoma with extension to the Duodenal Wall

Case 48

Clinical Presentation

A 66-year-old woman had total hysterectomy 15 years ago for multiple myomas presented with 3 years' history of recurrent left flank pain.

Radiological Findings



CT urography, axial (A, B) and coronal reconstruction (C, D) images showing an enlarged left kidney with dilated pelvi-calyceal system and ureter and delayed contrast excretion. Note soft tissue structure of irregular and spiculated contours encircling the left lower ureter (postoperative fibrosis, arrow in image B). Note the right kidney and collecting system are normal.

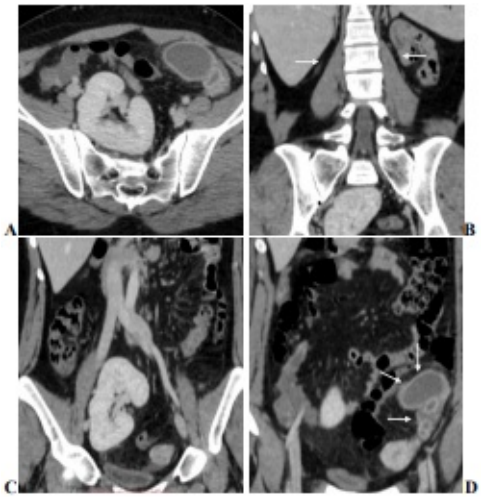
Diagnosis: Left Ureterohydronephrosis on Postoperative Fibrosis

Case 49

Clinical Presentation

A 31-year-old unmarried woman presented with abdominal pain in the left iliac fossa and fever. No prior past medical history.

Radiological Findings



Enhanced abdominal CT scan, axial (A) and coronal reconstruction (B, C, D) images show a solitary ectopic right kidney in the right upper pelvic region with malrotation. No kidneys seen in the lumbar fossae (arrows in B). On image D the uterus is deviated to the left side (unicornuate uterus, class
II) with tortuous tubular structure of thick fluid content and enhanced wall indicating a pyosalpinx (arrows in D).

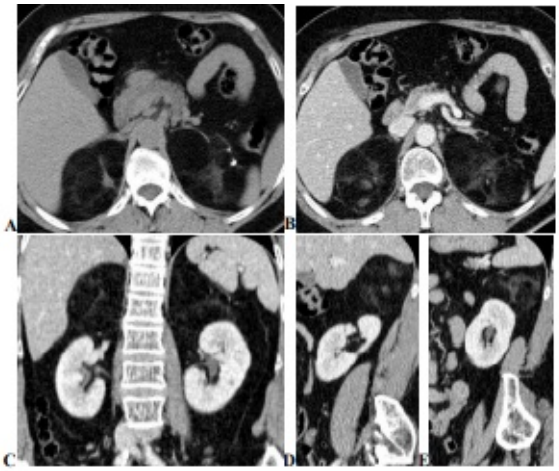
Diagnosis: Pyosalpinx in patient with Mullerian Anomalies Class II and Solitary Ectopic Kidney

Case 50

Clinical Presentation

A 61-year-old woman presented with chronic upper quadrant pain.

Radiological Findings



Pre-(A) and post-contrast (B) abdominal CT scan with coronal / right and left sagittal reconstruction (C, D, E) images show bilateral well- demarcated adrenal masses of predominately fat density with small punctate calcifications on the left side. Note mass effect on the liver and the upper pole of the kidneys with no infiltration of the adjacent organs.

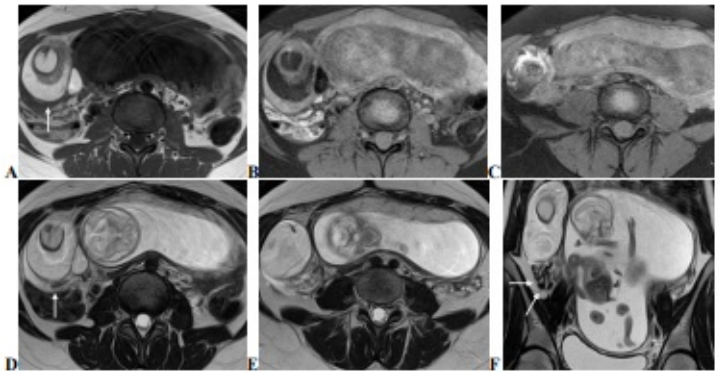
Diagnosis: Bilateral Adrenal Myelolipomas

Case 51

Clinical Presentation

A 25-year-old primigravida (18 weeks) presented with acute abdominal pain in the right iliac fossa. The ultrasound exam revealed a complex heterogeneous mass of the right lower quadrant.

Radiological Findings



Abdominal MR scan, axial T1 / T1 fat saturation (A, B, C) and axial / coronal T2 (D, E, F) images showing a well-encapsulated complex mass in the right lower flank and iliac fossa with mainly two components, fatty component of high signal intensity on both T1 and T2 and suppressed on T1 fat saturation and complex solid floating component (Rokitansky nodule) with suppression of the central fatty component on fat saturated T1, containing haemorrhagic area of high signal intensity (image C). Note an engorged vessels (double white arrows in F) with mild effusion around the mass (white arrow in A and D). The left ovary is well-visualised on image E.

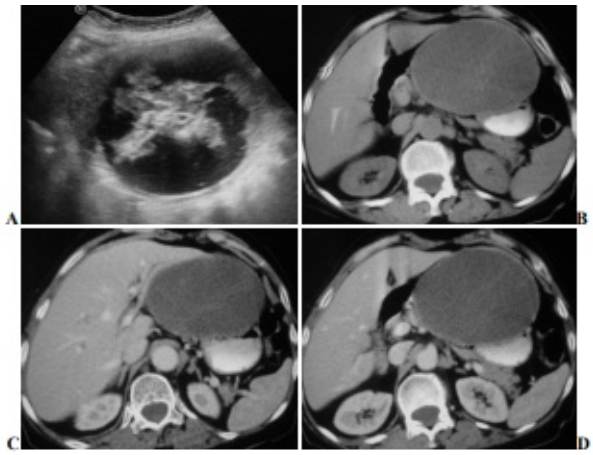
Diagnosis: Torsion of Right Ovarian Dermoid Cyst (Triple Torsion at Surgery)

Case 52

Clinical Presentation

A 72-year-old woman with past history of cholecystectomy few years ago complaining of chronic epigastric pain. The fibroscopic examination was not done. An abdominal ultrasound and CT scan were performed.

Radiological Findings



Ultrasound image transverse section at epigastric region (A) shows a large cystic mass containing a central heterogeneous structure with some posterior acoustic enhancement. **The pre-(B) and post-contrast (C, D) abdominal CT** shows that the cystic mass contains a central dense area with no enhancement after contrast administration, located in the lesser sac displacing stomach posterolaterally.

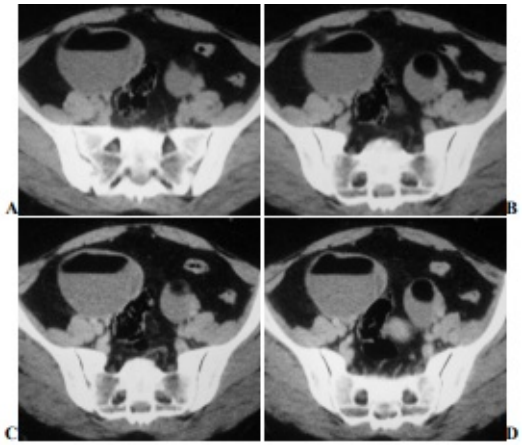
Diagnosis: Textiloma (or Gossypiboma), confirmed at surgery

Case 53

Clinical Presentation

A 40-year-old woman complaining of chronic pelvic pain.

Radiological Findings



CT scan, pre-(A, B) and post-contrast (C, D) images demonstrate bitateral pelvic cystic lesions (larger on the right) with fat-fluid level. No calcification or soft tissue component nor significant enhancement after contrast administration.

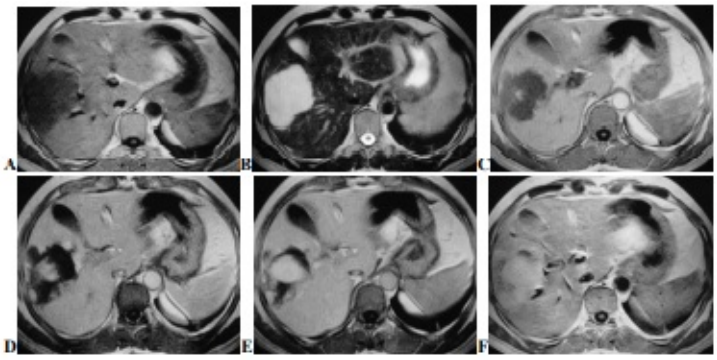
Diagnosis: Bilateral Ovarian Dermoid Cyst

Case 54

Clinical Presentation

A 53-year-old male patient with incidental findings, a mass lesion in the right lobe of the liver on the ultrasound examination done for epigastric pain.

Radiological Findings



Abdominal MR scan, pre-contrast T1 (A), T2 (B) and post-contrast axial T1 dynamic (C, D, E, F) images showing a large low-T1 and high-T2 lobulated mass of the right medial sector of the liver with progressive and centripetal enhancement on dynamic sequence and complete filling "high signal fill-in" on delayed sequence (F). The hepatic veins are displaced laterally and remain patent, as well as the right portal vein.

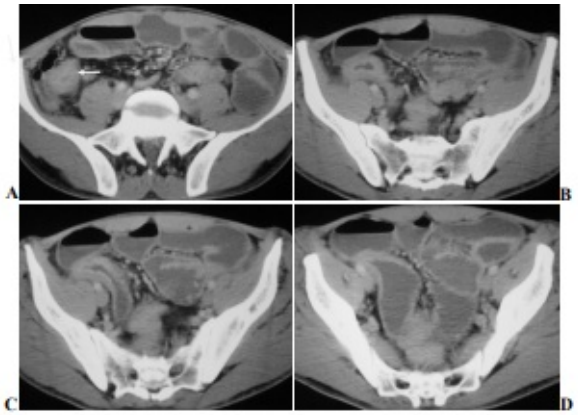
Diagnosis: Hepatic Haemangioma

Case 55

Clinical Presentation

A 42-year-old male patient treated for chronic disease presented with right lower quadrant pain.

Radiological Findings



Post-contrast CT scan images showing a regular circumferential thickening with enhancement of the terminal ileum. Note distal narrowing of the ileum (arrow in A) with dilated jejunal and other ileal loops. No fluid collection seen in the peritoneal cavity.

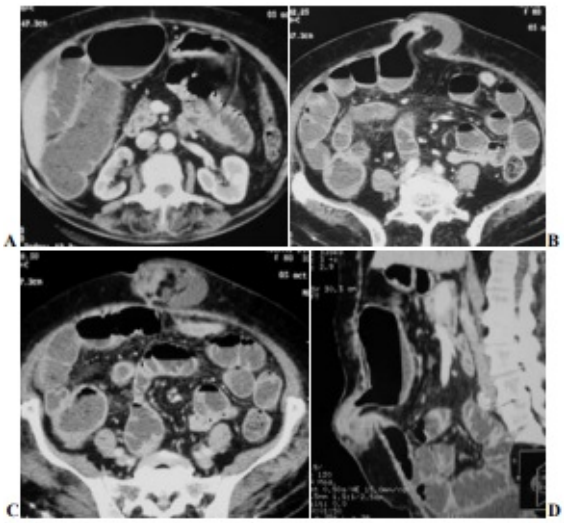
Diagnosis: Subocclusion in Crohn's Disease

Case 56

Clinical Presentation

A 79-year-old female patient had cholecystectomy 10 years ago, admitted for acute abdomen.

Radiological Findings



Enhanced Abdominal CT scan images showing an anterior abdominal wall defect at the umbilical region with herniary pouch containing a strangulated mid-transverse colon and omentum. The small bowel loops and right colon up to the strangulation are distended. Note that the transverse colon left to the strangulation shows normal size (image C).

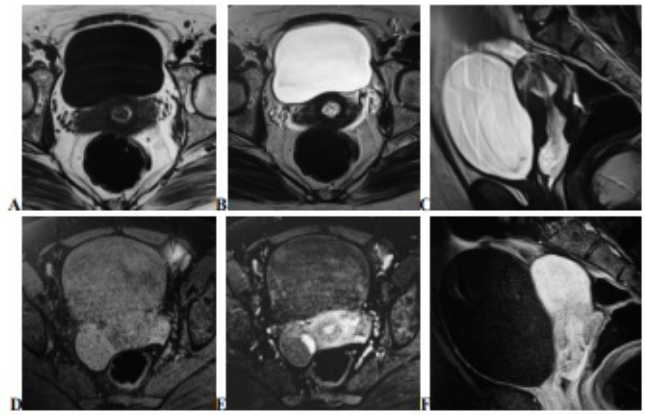
Diagnosis: Strangulated Eventration (containing transverse colon)

Case 57

Clinical Presentation

A 46-year-old patient with no child had menometrorrhagia since few days. The ultrasound examination revealed an echogenic intrauterine mass.

Radiological Findings



MR scan, axial T1 (A), axial / sagittal T2 (B, C), pre-and post-contrast axial / sagittal T1 fat-saturation (D, E, F) images show a pedunculated mass of the uterine cavity arising from the fundal region with a slender pedicle, prolapsing into the vagina via a distended endocervical canal. This mass appears of isosignal intensity on T1 surrounded by the high signal of the endometrium, and high signal intensity on T2 with early enhancement after gadolinium administration. Note small benign right ovarian cyst.

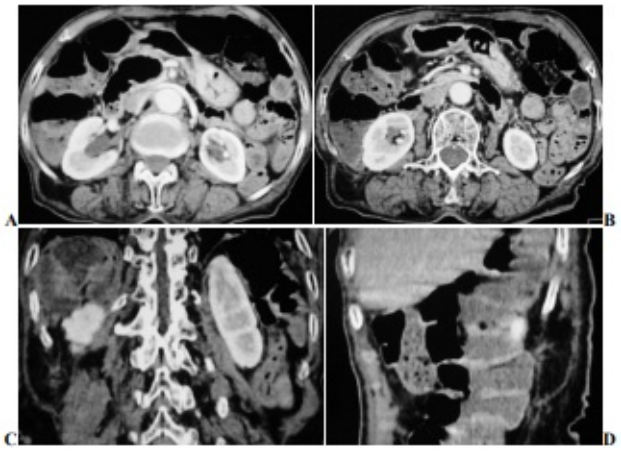
Diagnosis: Pedunculated Endometrial Polyp Prolapsed into the upper vagina

Case 58

Clinical Presentation

An 85-year-old woman with history of chronic right lumbar pain. The physical examination was remarkable for point tenderness and a palpable bulge below the right lower ribs, increased with forceful coughing.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B), coronal / sagittal reconstruction (C, D) images reveal a herniation of retroperitoneal fat through the fascial defect at the right superior lumbar triangle (Grynfeltt-Lesshaft hernia). The superior lumbar triangle is formed medially by the quadratus lumborum muscle, laterally by the internal abdominal oblique muscle, and superiorly by the 12th rib. The floor of the superior lumbar triangle is the transversalis fascia and its roof is the external abdominal oblique muscle.

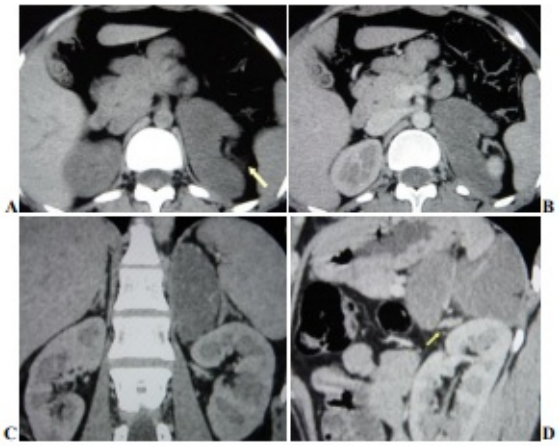
Diagnosis: Superior Lumbar Triangle hernia (Grynfeltt-Lesshaft Hernia)

Case 59

Clinical Presentation

A 28-year-old woman with history of left hypochondrial pain. The ultrasound examination (not shown) revealed a left suprarenal cystic mass.

Radiological Findings



Pre-(A) and post-contrast (B) abdominal CT scan with coronal / sagittal (C, D) reconstruction images show a well-circumscribed left supra- renal lobulated hypodense mass with punctuate enhancement, independent from the adrenal gland (arrow in A, D) which is displaced laterally with mass effect on the upper pole of the left kidney.

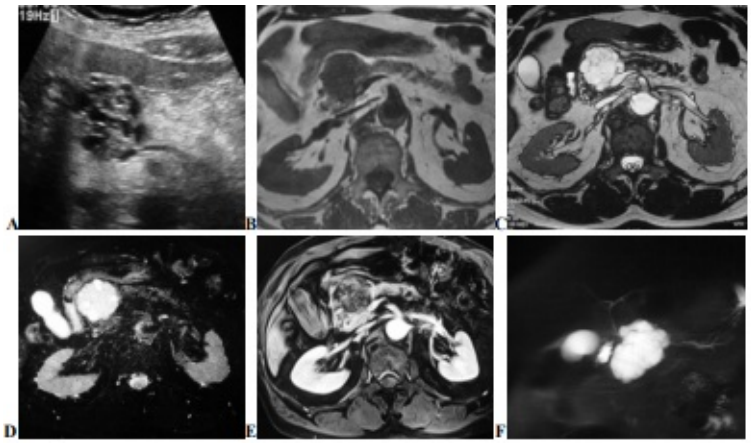
Diagnosis: Retroperitoneal Lymphangioma

Case 60

Clinical Presentation

A 75-year-old man with history of chronic epigastric pain, nausea and vomiting. No history of jaundice or weight loss.

Radiological Findings



Ultrasound image transverse section at pancreatic region (A) and MR scan, axial T1 (B), T2 (C), T2 fat saturation (D), post-contrast T1 fat saturation (E) and cholangio-MRCP-2D (F) images. The ultrasound section shows a large lobulated multicystic mass in the cephalo-isthmic region of the pancreas with some solid-appearing regions and increased through transmission. On MR this lesion appears hypointense on T1, hyperintense on T2 with septal enhancement and composed of an innumerable small cysts with thin septa giving it a honeycomb or sponge appearance visible mainly on T2 and cholangio-MRCP sequences.

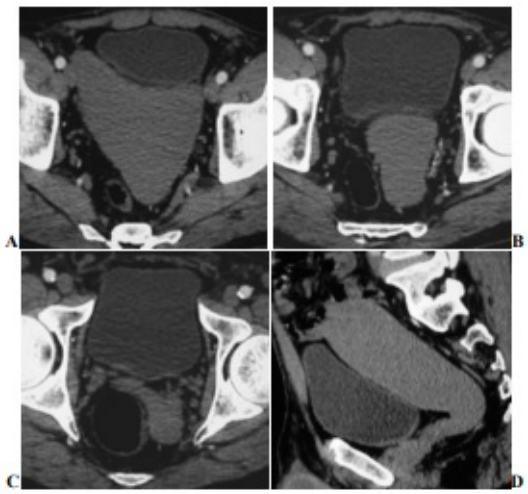
Diagnosis: Serous Cystadenoma of Pancreas

Case 61

Clinical Presentation

A 38-year-old male patient with 8 years' history of primary infertility, low ejaculate volume on semen analysis in association with very low sperm motility and azoospermia.

Radiological Findings



Enhanced pelvic CT scan, axial (A, B, C) with sagittal reconstruction (D) images reveal a large well-defined oblongue cystic mass of intervesicorectal location with no parietal enhancement and presenting a distal attachment with the left seminal vesicle which is also dilated, as well as the ejaculatory duct (not shown). The ultrasound examination (not shown) revealed a distal stenosis of the ejaculatory duct with left renal agenesis.

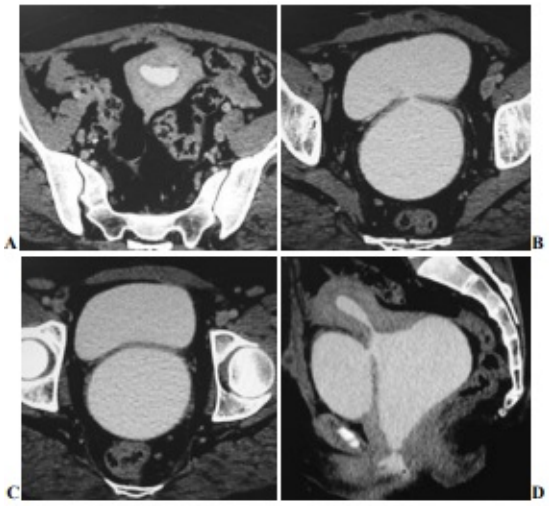
Diagnosis: Cystic Dilatation of Vas Deferens, Seminal Vesicle and Ejaculatory Duct due to distal obstruction of Ejaculatory Duct with associated ipsilateral Renal Agenesis (Zinner Syndrome)

Case 62

Clinical Presentation

A 32-year-old woman had caesarean section 6 months ago. Two weeks following her caesarean, she presented watery discharge from the vagina with minimal urethral voiding since.

Radiological Findings



CT urography, axial (A, B, C) and sagittal reconstruction (D) images show a thin fistulous tract from the posterior wall of the urinary bladder into the upper vagina well- visualised on images **(B, D)**. Note that the vagina is distended and urinary bladder is small in size due to the continuous involuntary discharge of urine into the vagina vault.

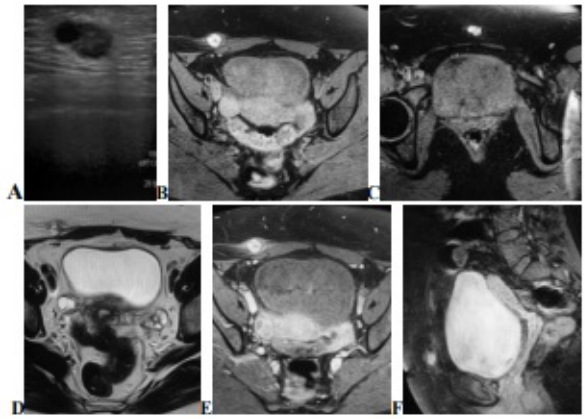
Diagnosis: Vesico-vaginal Fistula (Postoperative/Iatrogenic in nature)

Case 63

Clinical Presentation

A 30-year-old patient with history of previous caesarean sections (2 years and 8 months ago) presented with continuing cyclical pain symptoms after previous surgery. On examination, painful nodules of the abdominal wall were noted at the right iliac fossa and pelvic midline at the level of the caesarean scar.

Radiological Findings



Ultrasound of the pelvic wall, longitudinal section at the right iliac fossa (A), MR scan, axial T1 fat saturation (B, C), axial T2 (D) and post-contrast axial / sagittal T1 fat saturation (E, F) images. The ultrasound section shows a lobulated hypoechoic lesion with solid and cystic components of deep location in pelvic wall. Another small similar lesion was seen (not shown) at the midline of the pelvic wall. On MR images both lesions are well- visualised, one at midline at the level of the caesarean scar (image C) and the other one at the right iliac fossa in contact of the right rectus abdominis (image B). These lesions appear of high signal intensity on T1, heterogeneous high signal intensity on T2 with no obvious enhancement after contrast administration. Note both ovaries show small follicles with no ovarian endometrioma.

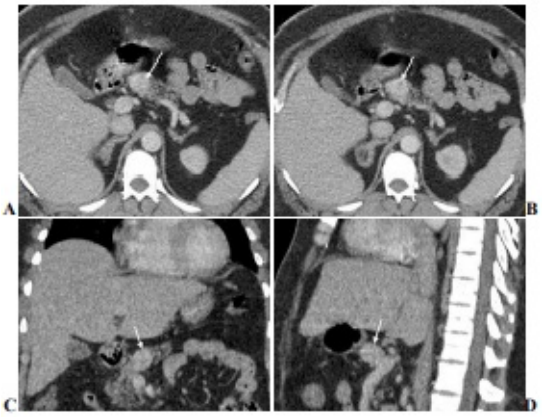
Diagnosis: Endometriosis of Abdominal Wall

Case 64

Clinical Presentation

A 31-year-old male patient with history of episodes of light-headedness associated with palpitation, tremulousness, feeling of impending doom in past, off and on for the last 4 years, which were relieved with eating something or taking glucose water orally. As per patient's information, most episodes were in the evening between 4 and 6 pm, and were associated with prolonged fasting and overexertion. Many times he was carried to the hospital and found to have low blood sugar levels, was treated with intravenous or oral glucose and resolution of symptoms within few minutes. He had no family history of diabetes, pituitary, or thyroid disease.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images reveal a small well-circumscribed soft tissue mass (2.5x2cm) with lobulated contours strongly enhanced after contrast administration, arising from the isthmic region of pancreas (arrows). The adjacent peripancreatic fat is preserved. No lymphadenopathy was seen.

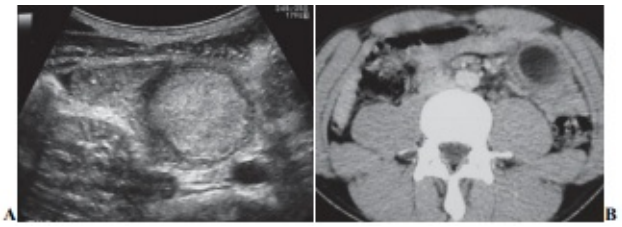
Diagnosis: Pancreatic Insulinoma

Case 65

Clinical Presentation

A 25-year-old male patient with history of intermittent abdominal pain, distension aggravated by eating. The laboratory investigation showed anaemia (7.2 mg/dl) and heme-positive stool.

Radiological Findings



Ultrasound image, transverse section at left flank (A) and enhanced CT scan at same level: The ultrasound image shows a well-circumscribed relatively homogeneous hyperechoic oval mass of intraluminal location in the jejunum, which appears hypodense on CT image (attenuation around -90 HU) with no enhancement seen. Note no signs of intussusception were seen.

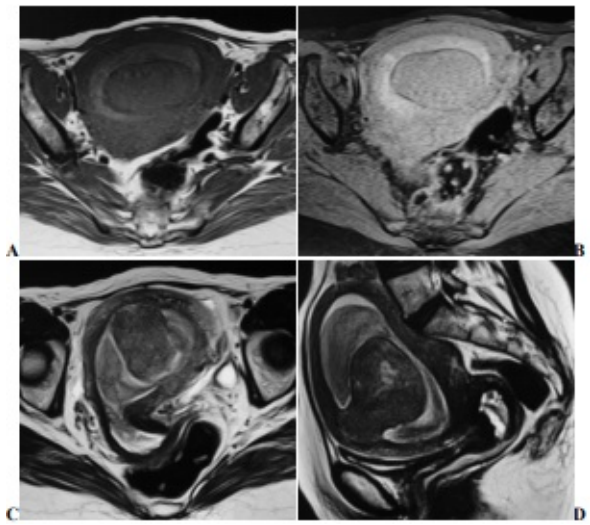
Diagnosis: Jejunal Lipoma

Case 66

Clinical Presentation

A 47-year-old patient with history of pelvic pain and abnormal vaginal bleeding.

Radiological Findings



MR scan, axial T1 (A), T1 fat saturation (B) and axial / sagittal T2 (C, D) images reveal a well-defined pedunculated submucosal mass of intermediate signal intensity on T1, low signal intensity on T2 with intralesional cystic degenerative changes, arising from the anterior uterine wall. Note intrauterine haemorrhage of high signal on T1 and low signal on T2 visible around the pedunculated mass.

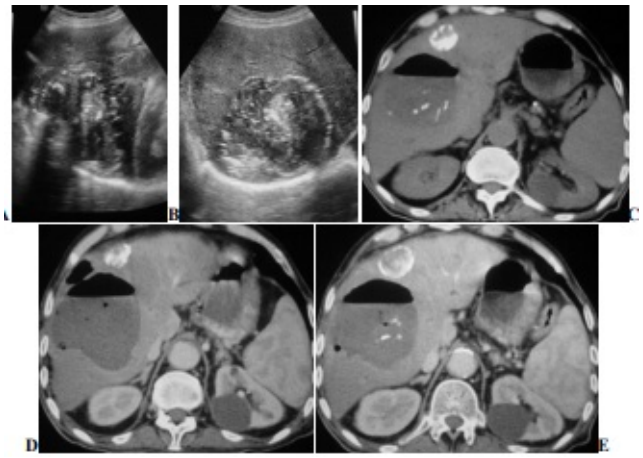
Diagnosis: Pedunculated Submucosal Leiomyoma

Case 67

Clinical Presentation

A 72-year-old male patient known to have hydatid cysts of the liver (not operated) presented with right upper quadrant pain and fever of 1-week duration with leucocytosis.

Radiological Findings



Abdominal Ultrasound longitudinal section at the RUQ (A) and recurrent subcostal (B), CT scan, Pre-(C) and post-contrast (D, E) images. The ultrasound images show a large mass of the right lobe of complex echotexture with posterior enhancement, containing areas of air and calcifications. The CT images demonstrate a large irregular lobulated cystic lesion of the right lobe of the liver containing air-fluid level with area of central calcifications. Note also an adjacent calcified liver cyst. Left cortical renal cysts are noted.

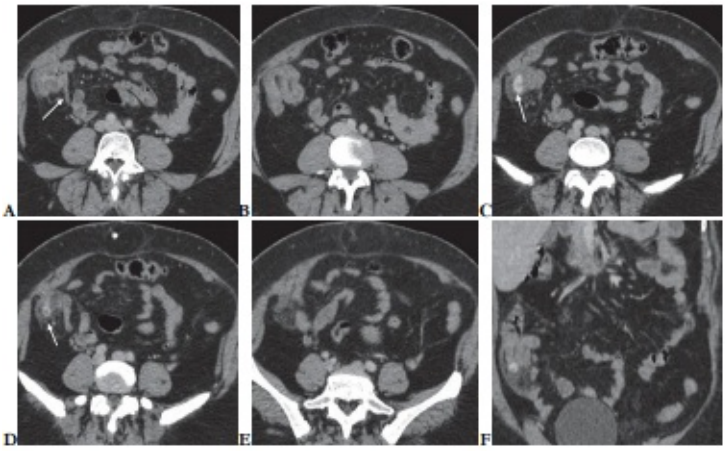
Diagnosis: Infected Hydatid Cyst of Liver

Case 68

Clinical Presentation

A 40-year-old woman with 5 days' history of pain in the right lower quadrant of the abdomen, vomiting and nausea. Her body temperature was 37.6°C. The physical examination showed rebound tenderness in the right lower quadrant of the abdomen. Laboratory tests were normal except for high WBC levels.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B, C, D, E) with coronal reconstruction (F) images. On image A (arrow) the appendix appears normal in location and appearance. The posterolateral wall of the caecum shows a diverticular structure of hyperdense content, thick and enhanced wall (arrows in images C and D) with pericaecal fat stranding. The ileocaecal valve and terminal ileum are normal in appearance (image B). Note hernia of the midline abdominal wall of epiploic content.

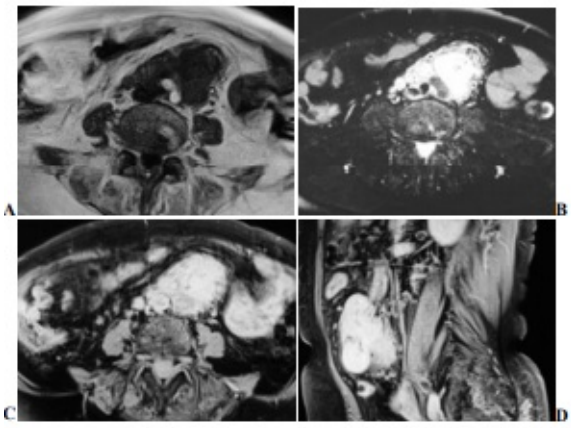
Diagnosis: Caecal Diverticulitis

Case 69

Clinical Presentation

An 84-year-old female patient presented with vague abdominal pain of 3 years' duration. She had no symptoms related to catecholamine excess such as headache, palpitations and diaphoresis. On examination, an abdominal mass was palpable at mid-abdominal region. She had no history of hypertension and her blood pressure was 100/60 mmHg at the time of admission. The rest of physical examination was unremarkable. The abdominal ultrasound showed a retroperitoneal hypoechoic mass.

Radiological Findings



MR scan, axial T1 (A), T2 fat saturation (B) and post-contrast axial / sagittal T1 fat saturation (C, D) images demonstrate a retroperitoneal soft tissue mass encircling the bifurcation of the aorta and IVC and appears of low signal intensity on T1, high signal intensity on T2 with strong and relatively homogeneous enhancement after contrast administration with prominent surrounding vessels, indicating a hypervascular retroperitoneal mass.

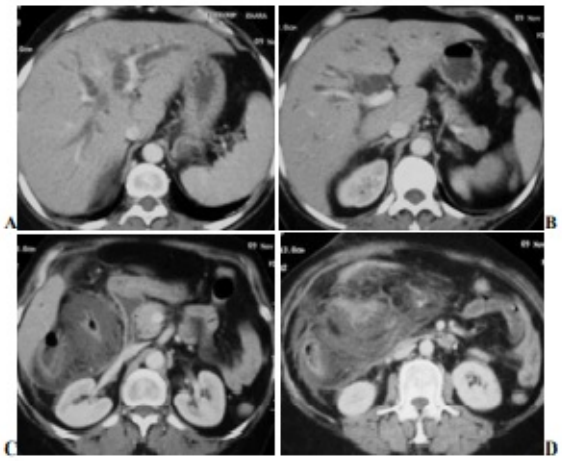
Diagnosis: Retroperitoneal Paraganglioma

Case 70

Clinical Presentation

A 52-year-old female patient had cholecystectomy 1 and a ½ month ago for cholilithiasis with no CBD stone presented with severe abdominal pain and jaundice.

Radiological Findings



Enhanced abdominal CT scan shows dilated intrahepatic and common bile ducts with normal size of distal CBD, sub-hepatic fluid collection with oedematous thickening of the right colonic flexure extending to the ascending colon and infiltration of the pericolonic fat and mesenteric root.

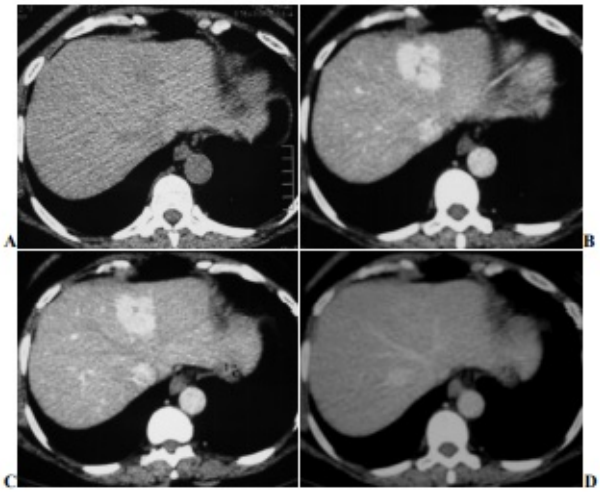
Diagnosis: CBD Injury with Biliary Peritonitis (confirmed at surgery)

Case 71

Clinical Presentation

A 58-year-old female patient with history of right flank pain. An abdominal ultrasound revealed a hepatic nodule.

Radiological Findings



Abdominal CT scan, pre-contrast (A) and post-contrast arterial phase (B, C) and portal phase (D) images showing a spontaneously slightly hypodense lesion of the segment IVa with intense enhancement in arterial phase and becoming isodense to the liver with central hypodense scar in portal phase.

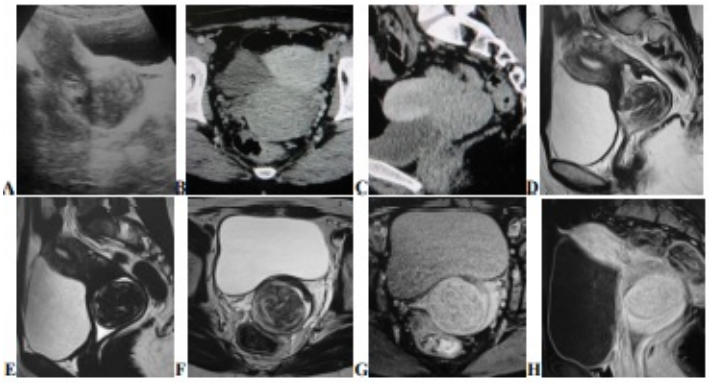
Diagnosis: Focal Nodular Hyperplasia (FNH)

Case 72

Clinical Presentation

A 28-year-old female patient with history of recurrent genital infection and right flank pain. An ultrasound, enhanced CT scan and MR scan examinations were performed.

Radiological Findings



Ultrasound image longitudinal pelvic section (A), enhanced CT scan with sagittal reconstruction (B, C) and MR scan, sagittal / axial T2 (D, E, F), pre-contrast axial (G) and post-contrast sagittal (H) T1 fat-saturation images. The ultrasound reveals a cervical lesion of heterogeneous echotexture. The CT images show a mildly hypodense mass at the cervicovaginal region suspicious for a cervical mass versus fibroid. The MR images reveal a pedunculated submucosal mass of low signal intensity on T2 with uniform enhancement, prolapsing into the vagina via a distended endocervical canal.

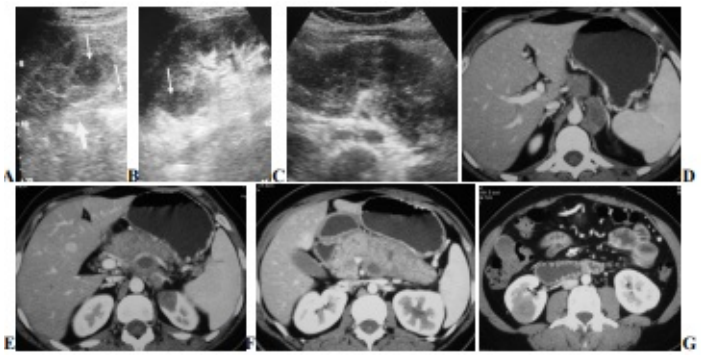
Diagnosis: Submucosal Fibroid Prolapsing into the Vagina

Case 73

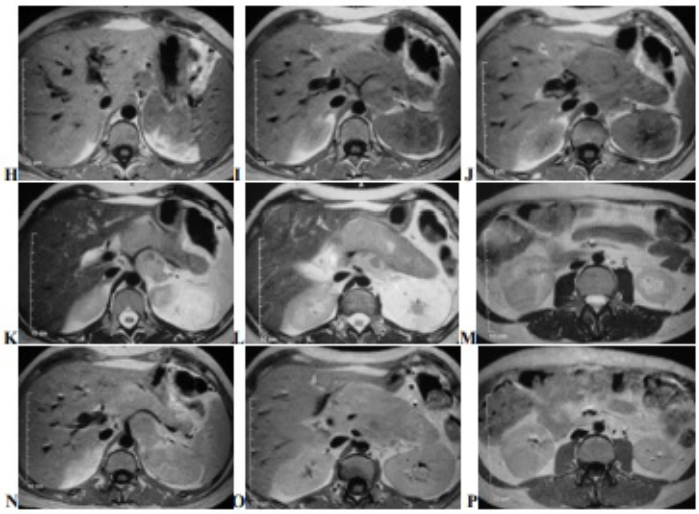
Clinical Presentation

A 28-year-old female patient with 3 months' history of epigastric pain. An abdominal ultrasound was performed and showed (according to the report) an acute pancreatitis.

Radiological Findings



Ultrasound examination, longitudinal section of right kidney (A), left kidney (B), transverse section at pancreas (C) and enhanced abdominal CT scan (D, E, F, G) images. The ultrasound images show an ill-defined heterogeneous hypoechoic cortical nodule of both kidneys (arrow in A, B), the pancreas appears diffusely enlarged and heterogeneously hypoechoic. On CT images the pancreas shows a heterogeneous enhancement with soft tissue mass encasing the coeliac trunk and superior mesenteric vessels with extension to the lesser omentum. Both renal nodules are well-visualised and showed heterogeneous enhancement (images E, G). Note left adrenal nodule (images D, E).



continued same patient, Abdominal MR scan, axial T1 (H, I, J), T2 (K, L, M) and post- contrast T1 (N, O, P) weighted images. The pancreas is diffusely enlarged with smooth contours of intermediate signal intensity on T1, high signal intensity on T2 with moderate inhomogeneous enhancement after gadolinium administration. The tumoural pancreatic process is extended to the coeliac and mesenteric regions with encasement of the vessels. The renal nodules, as well as the left adrenal nodule, are well-visualised.

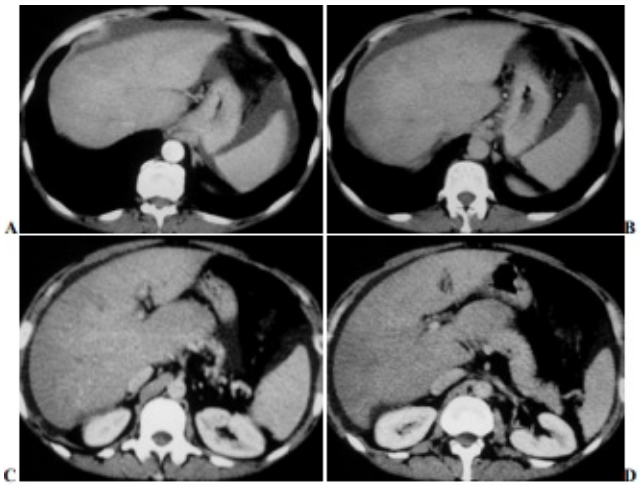
Diagnosis: Pancreatic Lymphoma with Renal and Adrenal Involvement

Case 74

Clinical Presentation

A 38-year-old male patient presented with right upper abdominal pain and hepatomegaly on clinical examination.

Radiological Findings



Enhanced Abdominal CT Scan images reveal an enlarged liver with hypertrophy of the caudate lobe. Mottled liver enhancement with prominent enhancement of the central liver and weak enhancement of the peripheral zones (atrophic areas = reversed portal venous flow due to increased post-sinusoidal pressure produced by hepatic venous obstruction). Non-visualisation of the hepatic veins. The IVC is patent. Note mild ascites.

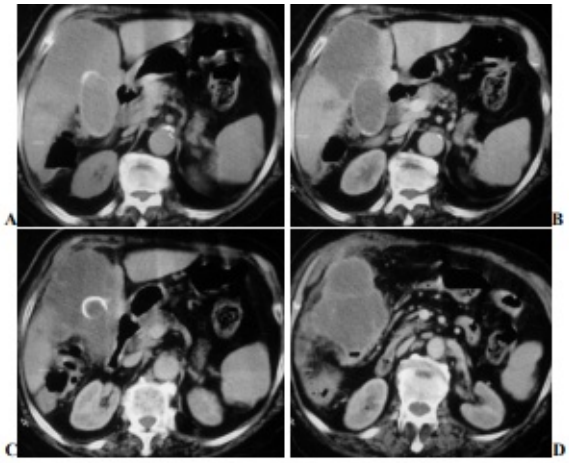
Diagnosis: Budd-Chiari Syndrome (Type 2 in this case)

Case 75

Clinical Presentation

An 88-year-old woman presented with a week-long history of progressive right upper quadrant pain. She reported a 6-pound weight loss over the past few weeks associated with anorexia. She denied any nausea, vomiting, dysphagia, or alterations in bowel habits. She had no history of fever or jaundice. Her past medical history was insignificant except cholelithiasis (known since 10 years).

Radiological Findings



Abdominal CT scan, Pre-(A) and post-contrast (B, C, D) images showing a hypodense soft tissue mass with mild heterogeneous enhancement filling the lumen of gallbladder, containing gallstone with extension to the adjacent hepatic segments (IV/V). Note the ill-defined gallbladder wall with nodular infiltration of the perivesicular peritoneum.

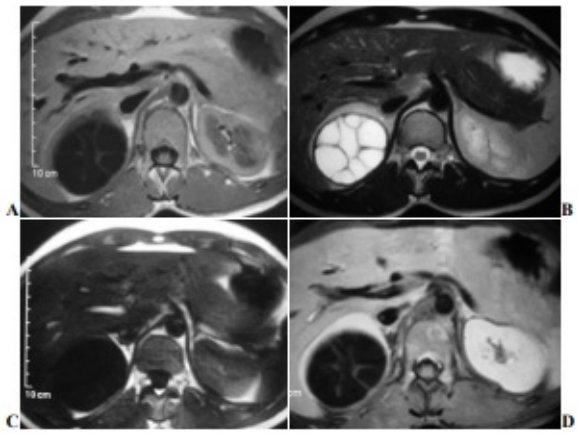
Diagnosis: Gallbladder Carcinoma with Extension to the Liver and Perivesicular Peritoneum

Case 76

Clinical Presentation

A 25-year-old woman of rural origin with no significant medical history presented with urinary urgency and left flank pain. At physical examination, the patient was afebrile, and there was palpable fullness in the right upper quadrant of the abdomen with no tenderness. Initial laboratory test results were normal except for an elevated WBC (13700/mm3) and microscopic haematuria.

Radiological Findings



MR scan, axial T1 (A), T2 (B), WFS (C) and post-contrast T1 (D) images showed a well-defined complex right renal cystic mass. The parent cyst has a thin low-signal-intensity rim on T2 and contains multiple high-signal-intensity daughter cysts within a fluid matrix (central area). The wall of the parent cyst shows enhancement after administration of contrast material (maternal matrix).

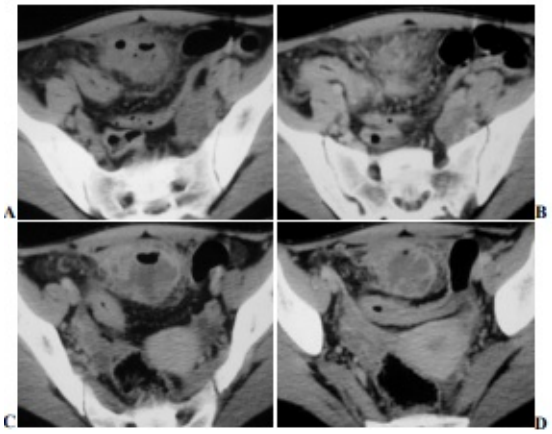
Diagnosis: Renal Hydatid Cyst

Case 77

Clinical Presentation

A 27-year-old female patient with long history of chronic diarrhoea presented with 10 days' history of fever and right lower abdominal pain.

Radiological Findings



Pelvic CT scan, pre-(A) and post-contrast (B, C, D) images reveal a long circumferential thickening of the terminal ileum and well- encapsulated pelvic collection containing air-fluid level with thick enhanced wall and densification of the surrounding pelvic fat.

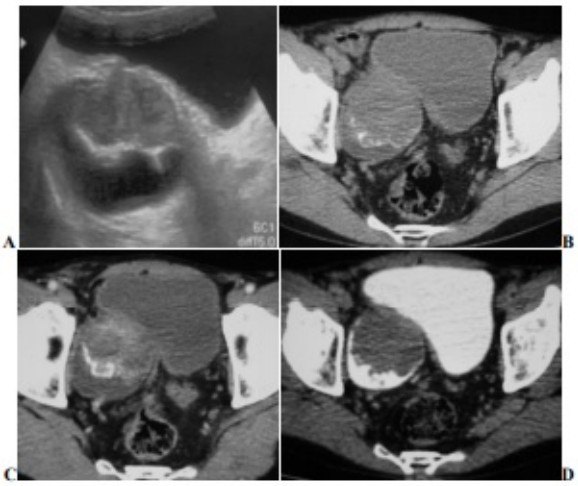
Diagnosis: Pelvic Abscess Complicating Crohn's Disease

Case 78

Clinical Presentation

A 66-year-old male patient going for surgery for right inguinal hernia and complaining of signs of cystitis. US examination was done, then CT scan.

Radiological Findings



The US examination (transverse section A) showing a solid hypoechoic mass right posterolateral to the bladder surrounded by fluid area. **The non- enhanced CT scan (B)** reveals a soft tissue mass isodense to the muscles containing an area of calcification with mild and heterogeneous enhancement after contrast administration. The delayed section **(D)** showing a contrast medium surrounding the mass indicating its communication with the bladder.

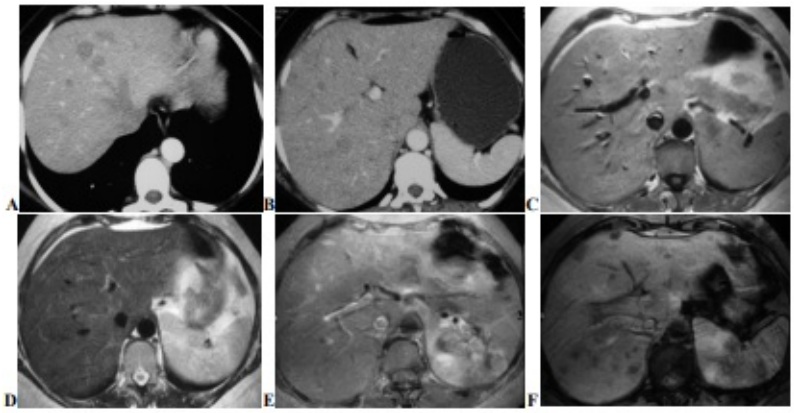
Diagnosis: Carcinoma within Bladder Diverticulum

Case 79

Clinical Presentation

A 40-year-old female patient complaining of right upper quadrant pain. The US examination revealed multiple hyperechoic lesions of the liver suggesting haemangiomatosis or metastases.

Radiological Findings



Enhanced CT scan (A, B) showing multiple non-enhanced hypodense lesions of various size disseminated in both hepatic lobes. On **MR scan** these lesions are not visible on **T1 (C)** and **T2 (D)**-weighted images and also on **T1 GE in-phase (E)** image, but on **out-phase** image **(F)** the lesions are well-visualised as multiple low signal areas.

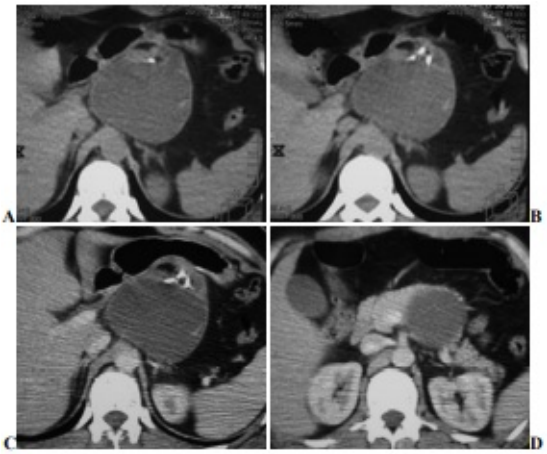
Diagnosis: Pseudo-Nodular Steatosis (Mimicking Haemangiomatosis or Metastases)

Case 80

Clinical Presentation

A 30-year-old male patient complaining of chronic epigastric pain with episodes of vomiting. The US examination revealed an epigastric cystic mass.

Radiological Findings



Abdominal CT scan, before (A) and after (B, C, D) contrast administration reveals a large complex cystic mass centred on the corporeo- caudal region of the pancreas and presenting four components, cystic (predominant), fatty, soft tissue with mild enhancement and finally foci of calcification. The stomach is displaced anteriorly and presenting an obtuse angle with the mass.

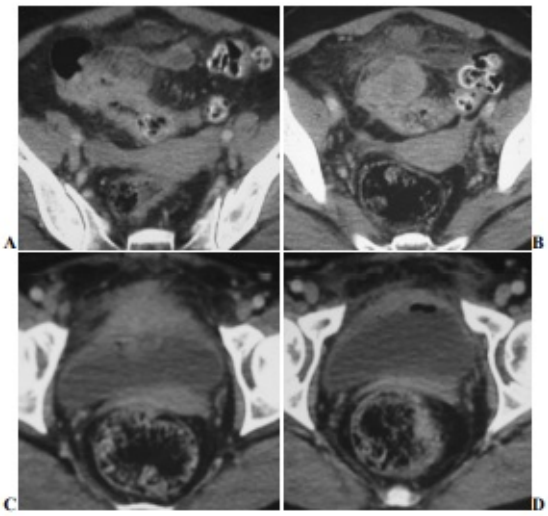
Diagnosis: Pancreatic Dermoid Cyst

Case 81

Clinical Presentation

A 58-year-old female patient with history of weight loss, per-rectal bleeding and foul urine.

Radiological Findings



Enhanced CT scan images reveal an irregular circumferential thickening of the sigmoid colon (length about 7.5 cm) with an exophytic mass (image B) of the anti-mesenteric mesosigmoid infiltrating the bladder roof with air bubble within the urinary bladder indicating fistula.

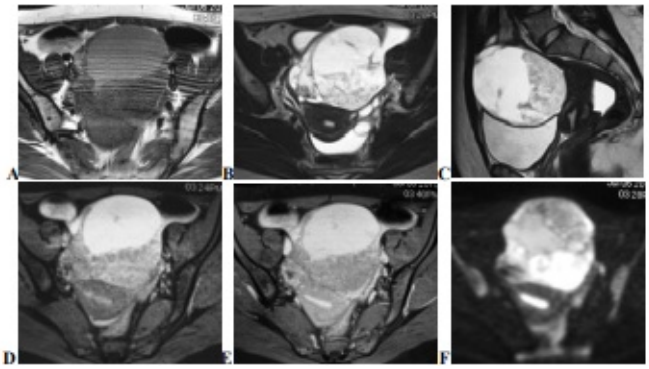
Diagnosis: Carcinoma of Sigmoid Colon with Colo-vesical Fistula

Case 82

Clinical Presentation

A 24-year-old female patient with 4 days' history of pelvic pain. The ultrasound examination revealed a complex pelvic mass. The tumoural markers were normal.

Radiological Findings



Pelvic MR scan, axial T1 (A), axial / sagittal T2 (B, C), pre-(D) and post-contrast axial (D, E) T1 fat-saturation and isotropic diffusion (F) images demonstrate a huge well- circumscribed complex cystic lesion of intervesicouterine location arising from the right ovary and appears of high signal intensity on T1 and T2 with declive area of low signal indicating intra-cystic haemorrhage. No significant peripheral enhancement after gadolinium administration. Note high T1 and T2 intraperitoneal effusion indicating haemperitoneum.

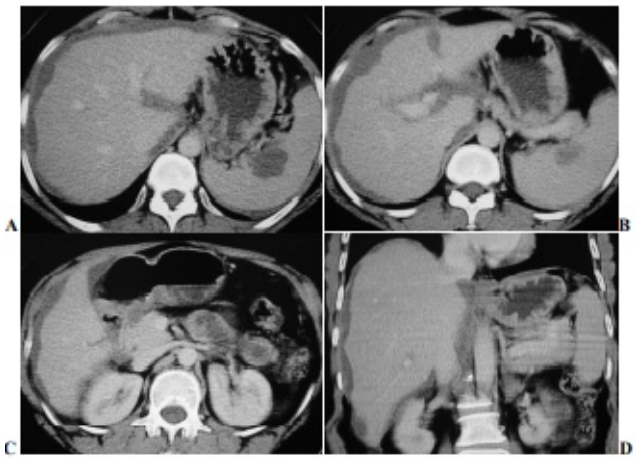
Diagnosis: Complex Haemorrhagic Ovarian Cyst

Case 83

Clinical Presentation

A 36-year-old female patient with past history of bilateral ovarectomy for tumoural process.

Radiological Findings



Enhanced abdominal CT Scan (A, B, C) with coronal reconstruction (D) images revealed low-attenuation loculated heterogeneous ascites scalloping the margins of the liver and spleen.

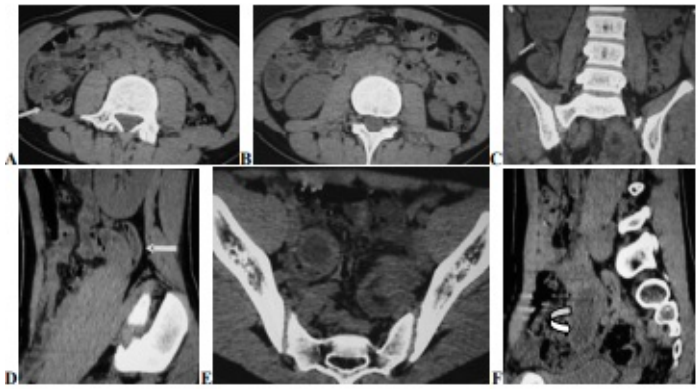
Diagnosis: Pseudomyxoma Peritonei

Case 84

Clinical Presentation

A 15-year-old female presented with 24 hours' history of abdominal pain in the right iliac fossa, nausea and vomiting. She had no significant past medical history or previous abdominal surgery. On admission she had normal vital signs and a temperature of 37.3°C. Physical examination showed a slightly distended abdomen with hyperactive bowel sounds. The patient had moderate abdominal tenderness without guarding. No masses or hernias were identified. Laboratory tests revealed increased white blood cells (WBC) of 12,200/mm3.

Radiological Findings



Non-enhanced pelvic CT scan, axial (A, B, E), coronal and sagittal reconstruction (C, D, F) images. The appendix is of retro-caecal position (arrow in images A, C, D) with normal size. Note thickening of a small bowel loop in the pelvic region (image E) with doughnut configuration. The sagittal reconstruction (image F) shows a blind-ending pouch that arises from the antimesenteric side of the ileum (curved arrow).

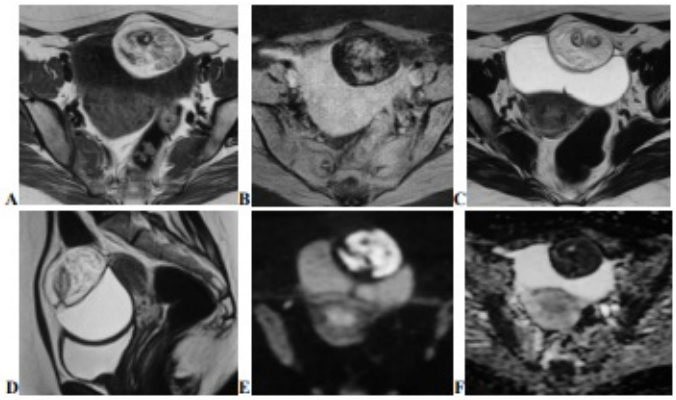
Diagnosis: Inverted Meckel's Diverticulum

Case 85

Clinical Presentation

A 29-year-old female patient presented with pelvic pain and palpable mass increasing over the past few months. No previous history of surgery. The ultrasound revealed a complex cystic mass of the pelvic region.

Radiological Findings



MR san, axial T1 (A), T1 fat saturation (B), axial / sagittal T2 (C, D) and DWI / ADC (E, F) images demonstrate a well-encapsulated supravesical complex cystic mass with mainly two components, cystic component of low signal on T1 and high signal on T2 with no restricted diffusion and solid floating component (Rokitansky nodule) of heterogeneous high signal on both T1 and T2, with suppression of the fatty component on fat saturated T1. On DWI this nodule shows severely restricted diffusion. Note the uterus and left ovary were normal.

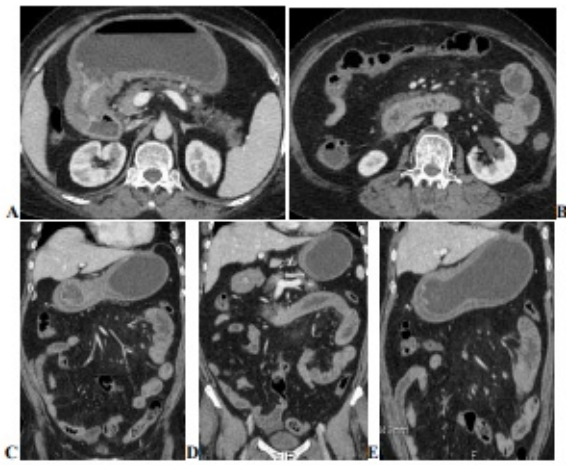
Diagnosis: Ovarian Dermoid Cyst

Case 86

Clinical Presentation

A 59-year-old female admitted to the hospital with vomiting, abdominal pain, abdominal distension, and diarrhoea. She had no history of food allergies or bronchial asthma. The clinical examination was unremarkable except a lower abdominal tenderness. A complete blood count revealed a white blood cell count of 14,190/mm3 with an eosinophil count of 8,973/mm3 (62.0%). The serum immunoglobulin E level was 2,500 U/mL (normal 6 to 90). The serum level of C-reactive protein was 1.25 mg/L.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) and coronal reconstruction (C, D, E) images showing circumferential wall thickening of stomach (mainly at pyloric region), duodenum and proximal small bowel with target sign. Mesenteric change is also noted with engorged mesenteric vessels, haziness and mild peritoneal effusion.

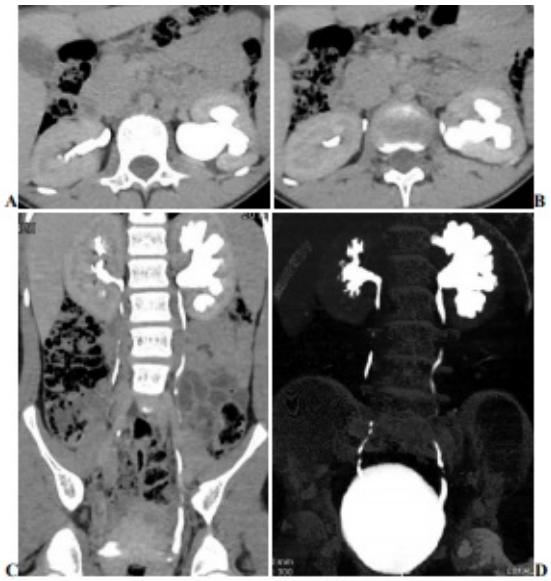
Diagnosis: Eosinophilic Gastroenteritis

Case 87

Clinical Presentation

A 12-year-old girl with history of left flank pain and symptoms of urinary infection. The MCUG didn't show any VUR.

Radiological Findings



CT Urography, axial (A, B), 2D coronal / 3D volume rendering maximum intensity projection (C, D) images demonstrating dilatation of the left pelvi-calyceal system with mild globular shape of the renal pelvis and narrowed pelvi-ureteric junction. No delayed contrast excretion into left ureter. Note thinning of the cortical renal parenchyma as compared to the normal right side.

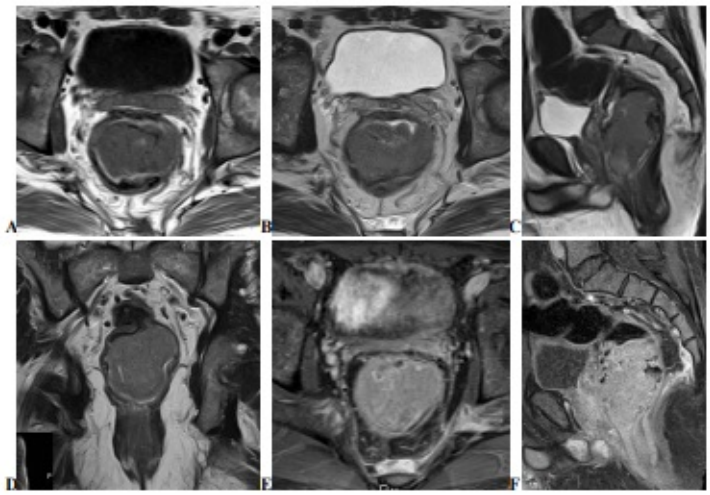
Diagnosis: Pelvi-ureteric Junction Obstruction

Case 88

Clinical Presentation

A 60-year-old male patient complaining of lower abdominal pain and episodes of constipation. He had a CT scan which revealed tumoural process of the mid-rectum. Rectal biopsy done twice before MR scan showed a normal rectal mucosa (Submucosal tumour?).

Radiological Findings



Pelvic MR scan, axial T1 (A), axial / sagittal / coronal T2 (B, C, D) and post-contrast axial / sagittal T1 fat saturation (E, F) images showing a large submucosal soft tissue mass arising from the left lateral wall of the mid-rectum and obstructing the rectal lumen. It appears of intermediate signal intensity on both T1 and T2 with heterogeneous enhancement after gadolinium administration. It is 7.7 cm long and distal edge is 5 cm from the anal margin. There is no evidence of extension beyond the serosa into the perirectal fat. The mesorectal fascia is preserved with no lymph nodes in the mesorectum.

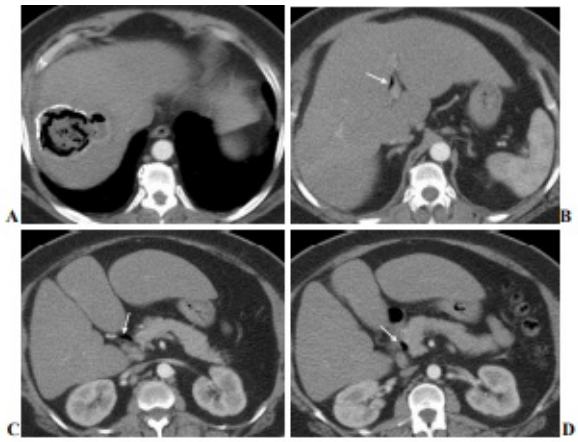
Diagnosis: Rectal Stromal Tumour

Case 89

Clinical Presentation

A 55-year-old woman after experiencing fever, right upper quadrant pain and jaundice, attributed to cholangitis.

Radiological Findings



Enhanced abdominal CT scan images demonstrate a cystic lesion located in the segment VII of the liver with eggshell calcification. Its inner part is exophytic with fluid content as well as air bubbles indicating infected cyst. Note air bubbles within the intra-and extra-hepatic biliary ducts (arrow in B, C and D), indicating fistulised cyst into the biliary ducts. The air bubbles within the cyst could be attributed to either an infection or a fistulous communication with the GI tract. The latter was excluded, as the patient never had an episode of hydatid-emesis.

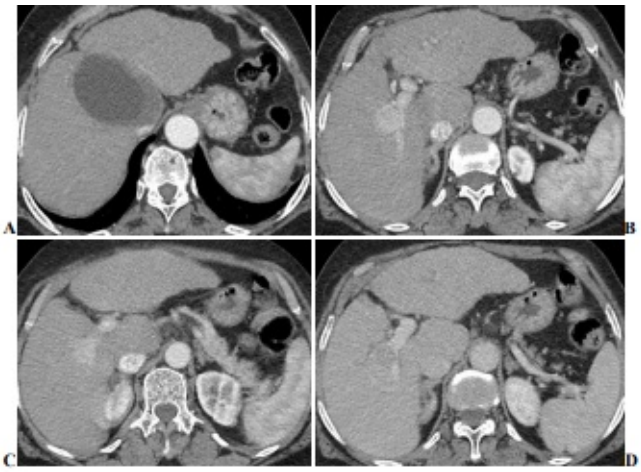
Diagnosis: Infected Hepatic Hydatid Cyst, Fistulised into the Biliary Ducts

Case 90

Clinical Presentation

A 76-year-old man, known case of chronic hepatitis C virus (HCV) infection. During the follow-up, the AFP was at 380 ng/mL.

Radiological Findings



Enhanced abdominal CT scan, arterial phase (A, B, C) and portal phase (D) images. The liver has nodular surface and dysmorphic features, in keeping with cirrhosis. A solid nodule (2.5 cm) is seen in the segment V with arterial contrast enhancement and rapid washout on portal phase consistent with HCC. Note a large hydatid cyst in the segments IVa/VIII (type 2 of Gharbi classification or CE3A WHO classification). Mild splenomegaly is also seen.

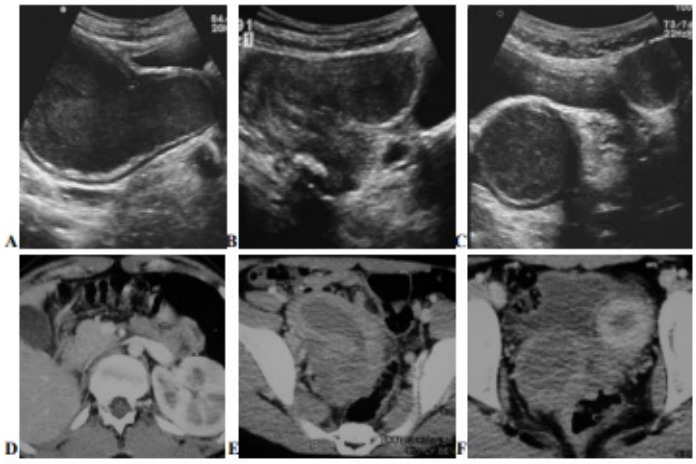
Diagnosis: Hepatocellular Carcinoma (HCC) in Cirrhotic Liver

Case 91

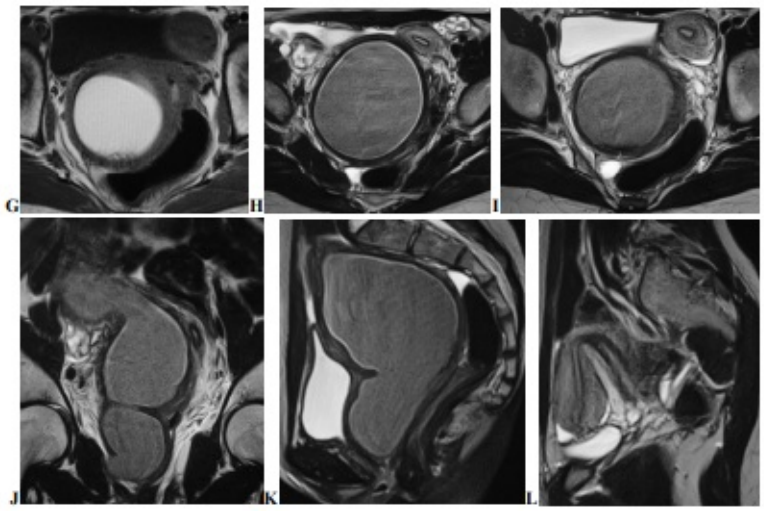
Clinical Presentation

A 14-year-old patient consulted for dysmenorrhea. She had her menarche 1 and a ½ year ago and since then, her dysmenorrhea had been worsening with increased severity of the hypogastric pain radiating to the right thigh. On rectal examination, a bulging of right paravaginal mass was noted.

Radiological Findings



Ultrasound examination of the pelvic region, the right parasagittal section **(A)** shows a distended fluid-filled cavity corresponding to the right hemiuterus with haematometrocolpos; left parasagittal section **(B)** shows a normal uterine structure corresponding to the left hemiuterus and transverse section **(C)** shows both separated hemiuterus with haematometrocolpos on the right side. **Enhanced CT scan** at the upper abdomen **(D)** shows no right kidney (ipsilateral renal agenesis). At pelvic region **(E, F),** the right hemiuterus is well-visualised with haematometrocolpos by obstructed right hemivagina; the left hemiuterus is also visible in the left paravesical region **(F).**



continued, MR scan, axial T1 (G) and axial / coronal / sagittal T2-weighted images (H, I, J, K, L) confirm the double uterus with right haematometrocolpos. The haematometrocolpos is seen as dilated uterine cavity and full vagina with high-signal intensity fluid on T1, attenuated on T2 weighted images reflecting the blood component (the signal intensity of the blood component depends on the haemoglobin age). Note that both ovaries are well-visualised on axial T2 image **(H)**, containing multiple small follicles.

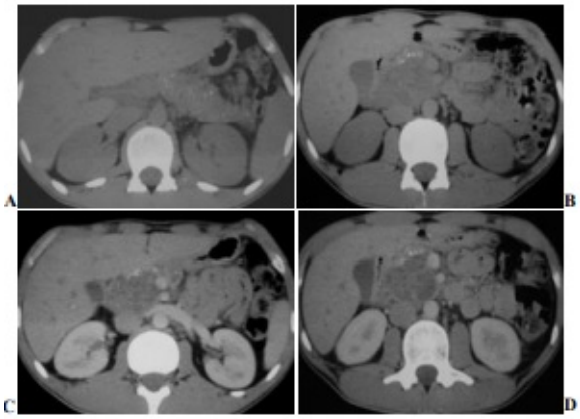
Diagnosis: Herlyn Werner Wunderlich Syndrome (Uterus Didelphys, Obstructing Hemivaginal septum resulting in a haematocolpos and Ipsilateral renal agenesis)

Case 92

Clinical Presentation

A 30-year-old male patient with 1-year history of epigastric pain. An abdominal ultrasound was performed and showed an epigastric mass.

Radiological Findings



Pre-(A, B) and post-contrast (C, D) Abdominal CT scan images show a cystic / solid mass of the pancreatic head composed of multiple small cystic areas, giving a honeycomb appearance with small central scar and microcalcification. The rest of the pancreatic gland shows multiple foci of calcifications.

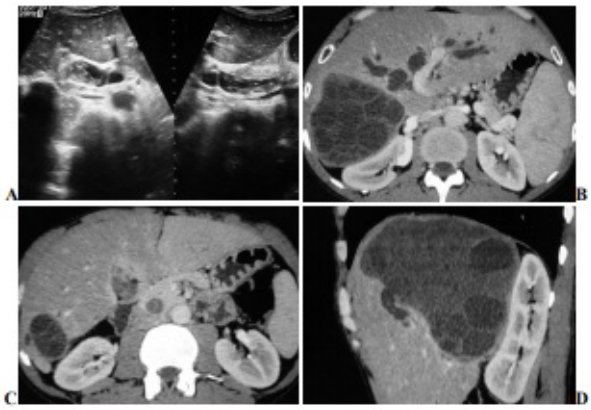
Diagnosis: Serous Cystadenoma of Pancreas (in patient with Chronic Calcifying Pancreatitis)

Case 93

Clinical Presentation

A 43-year-old male patient presented with high-grade fever and right hypochondrial pain of 10 days' duration. The patient was jaundiced, febrile and had a tender hepatomegaly. Laboratory investigations showed an abnormal liver function tests (LFTs) with a total bilirubin of 190mg/dl and raised serum alkaline phosphatase (820 U/L).

Radiological Findings



Ultrasound transverse and longitudinal sections at CBD (A, B) and enhanced abdominal CT scan (B, C) with sagittal reconstruction (D) images. The ultrasound images show dilated CBD, containing echogenic material without posterior acoustic shadow. The CT images show a large hydatid cyst (stage IV of Gharbi / CE4 of WHO classification) of the right lobe of the liver, ruptured into the intrabiliary ducts which are dilated (images B and D). The CBD is dilated containing linear hyperdense material corresponding to germinative membranes and other cyst contents**.**

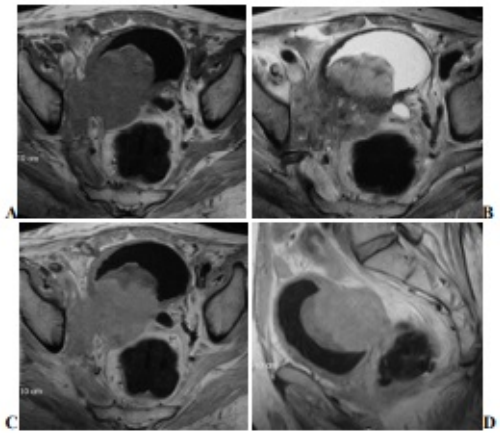
Diagnosis: Intrabiliary Rupture of Liver Hydatid Cyst

Case 94

Clinical Presentation

A 69-year-old male patient presented with macroscopic haematuria and right lower limb oedema.

Radiological Findings



Pelvic MR scan, axial T1 (A), T2 (B) and post-contrast axial / sagittal (C, D) T1 weighted images reveal a large soft tissue mass arising from the right posterolateral wall of urinary bladder. This soft tissue mass appears of intermediate signal intensity on T1, high signal intensity on T2 with heterogeneous enhancement after contrast administration. Extension of the tumoural process through the urinary bladder wall to the perivesical fat with infiltration of the right seminal vesicle, lower ureter, fascia recti, anterior rectal wall, right pelvic wall and right common femoral vein which is thrombosed. Retroperitoneal lymphadenopathy (not shown).

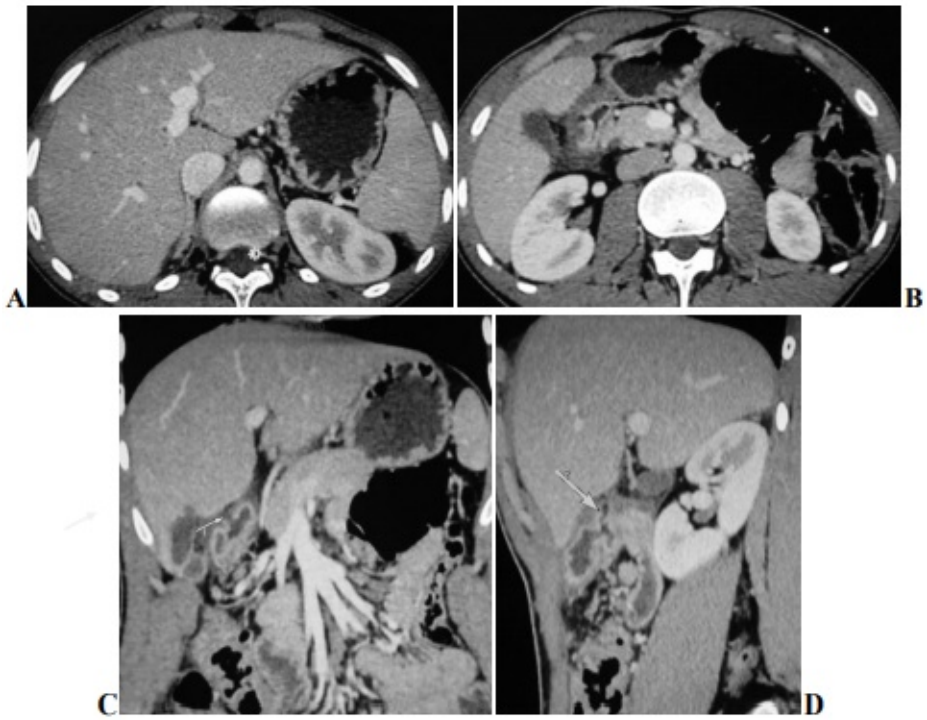
Diagnosis: Bladder Carcinoma (T4bN2Mx)

Case 95

Clinical Presentation

An 18-year-old male patient with past history of peptic ulcer disease presented with 24 hours' history of intense peri-umbilical pain, abdominal tenderness, distension and rigidity.

Radiological Findings



Enhanced Abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images reveal a transparietal breach (perforation) of the lateral aspect of the duodenal bulb (white arrow in C and D) with adjacent fluid collection containing air bubbles. Note free air in the peritoneal cavity around the liver (images A and B).

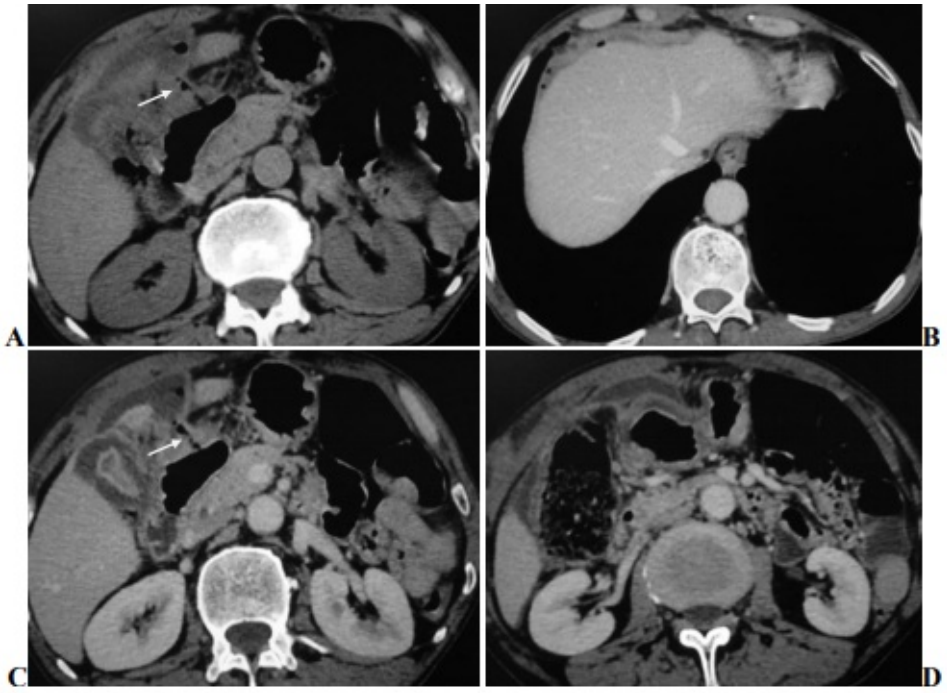
Diagnosis: Perforated Duodenal Ulcer (confirmed at surgery)

Case 96

Clinical Presentation

A 74-year-old man was admitted with a complaint of a constant dull aching pain in the epigastrium for 24 hours, which progressively worsened and generalised. He had a history of diabetes mellitus and ischemic heart disease. The patient was afebrile on admission and his vital signs were stable. The abdomen was tender all over with board-like rigidity. Chest radiography demonstrated pneumoperitoneum.

Radiological Findings



Pre-(A) and post-contrast (B, C, D) abdominal CT scan images show thickening of the antropyloric wall with transluminal linear perforation at the antral region (arrow in A and C). Note free air in the peritoneal cavity with fluid collection, adjacent perigastric fat stranding and thickened gallbladder wall.

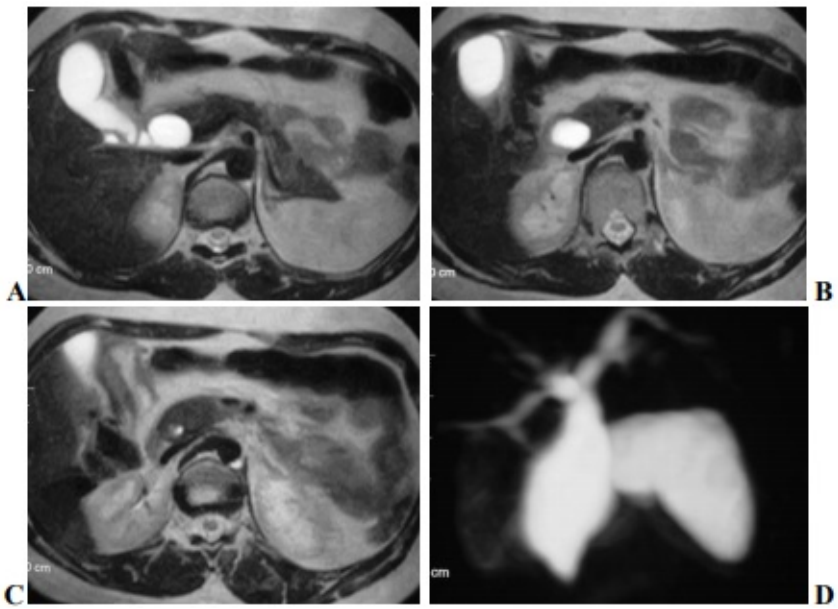
Diagnosis: Gastric Perforation

Case 97

Clinical Presentation

A 26-year-old female patient with history of chronic epigastric pain. An abdominal ultrasound was performed and showed dilated CBD.

Radiological Findings



MR scan, axial T2 (A, B, D) and 3D-MRCP (D) images show a fusiform dilatation of the intrahepatic biliary ducts, common bile duct and CBD with tapered distal end of CBD. No stone is seen and gallbladder appears normal.

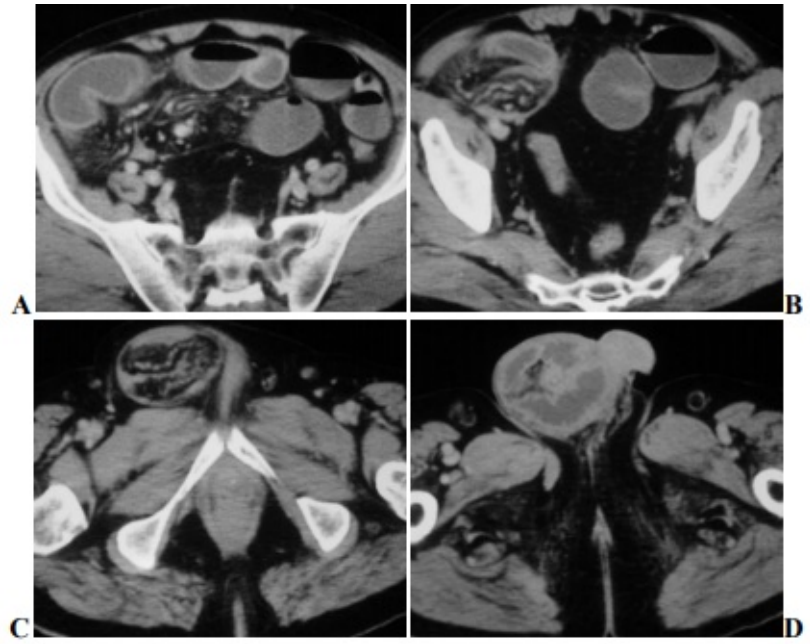
Diagnosis: Choledochal Cyst (Type IVa of Todani Classification)

Case 98

Clinical Presentation

A 72-year-old male patient presented with symptoms of intestinal obstruction and right inguinal mass.

Radiological Findings



Enhanced abdominopelvic CT scan images reveal an inguinal herniation of bowel structures on the right side, along the spermatic cord. The bowel structures in the hernial sac are thickened giving C- shaped configuration and show enhancement in the wall with fat stranding and mesenteric engorgement. Note the small bowel loops in the abdomen are distended, containing fluid with bright enhancement of viable bowel wall.

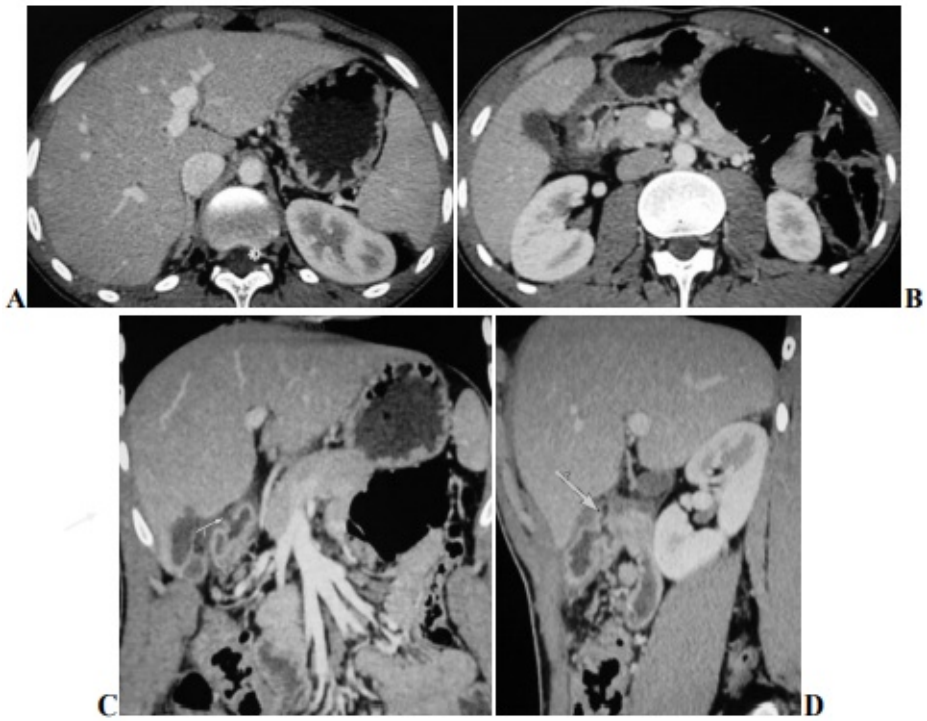
Diagnosis: Strangulated Indirect Right Inguinal Hernia

Case 99

Clinical Presentation

A 58-year-old male patient complaining of right upper quadrant discomfort.

Radiological Findings



Abdominal Ultrasound longitudinal section (A) and pre-(B) and post-contrast (C, D) CT scan with coronal reconstruction (E) images. The ultrasound reveals a large right suprarenal complex hyperechoic mass. The CT images reveal a large lobulated right suprarenal mass of complex fatty density with mild enhancement after contrast administration and mass effect on the liver parenchyma and upper pole of right kidney. Note bilateral renal cysts.

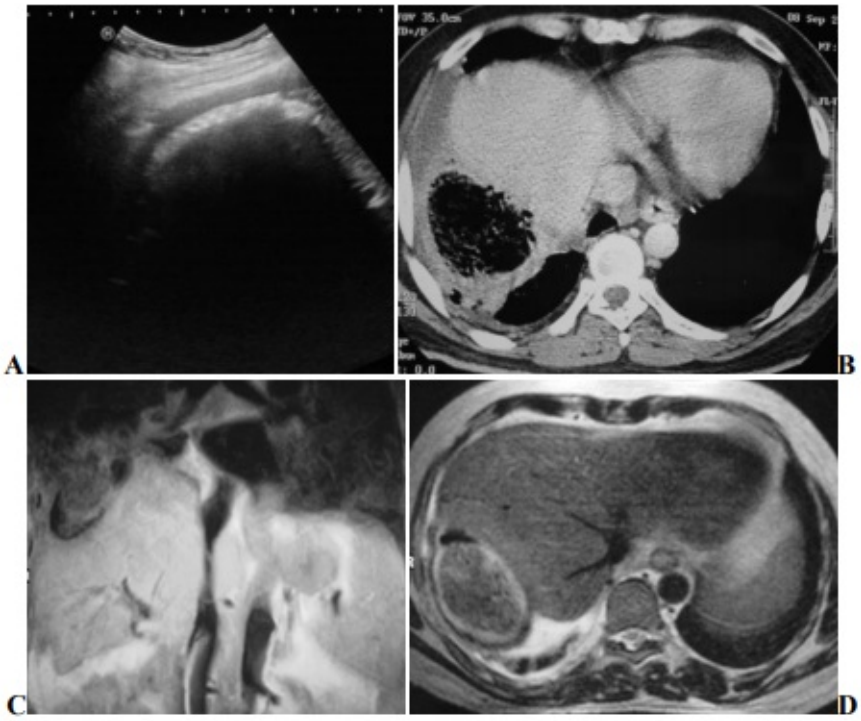
Diagnosis: Adrenal Myelolipoma

Case 100

Clinical Presentation

A 36-year-old male patient operated 1 year ago for hepatic hydatid cyst. Since that the patient is complaining of right upper quadrant pain and recently right chest pain and cough.

Radiological Findings



The US image (A) demonstrates an echogenic structure with posterior shadowing. **The enhanced CT scan image (B)** shows an ovoid structure containing air bubbles in the right subdiaphragmatic region with adjacent reactional pleural effusion. **The MR images, coronal T1 (C) and axial T2 (D)** show the right subdiaphragmatic structure as an ovoid well- defined mass of complex signal by the presence of air bubbles.

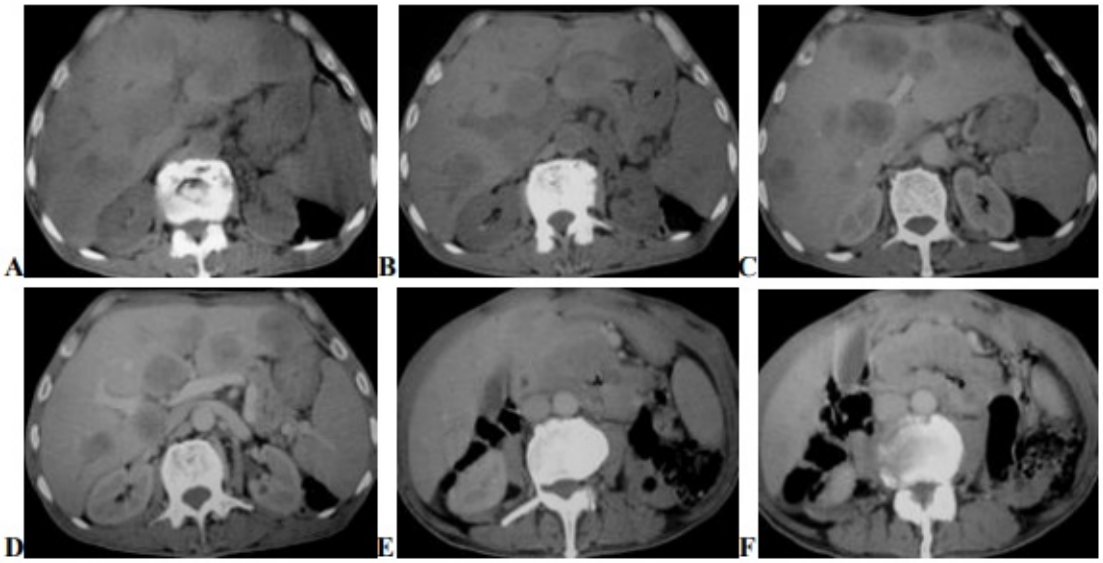
Diagnosis: Subdiaphragmatic Textiloma (or Gossypiboma)

Case 101

Clinical Presentation

A 79-year-old male patient with 3 months' history of right upper quadrant pain, anorexia and weight loss (21 kg in 3 months).

Radiological Findings



Abdominal CT scan, pre-(A, B) and post-contrast (C, D, E, F) images show multiple hypodense nodular lesions of various size disseminated in both hepatic lobes with heterogeneous enhancement after contrast administration. Images (E, F) reveal an irregular circumferentialrdthickening of the 3duodenum with no gastric stasis.

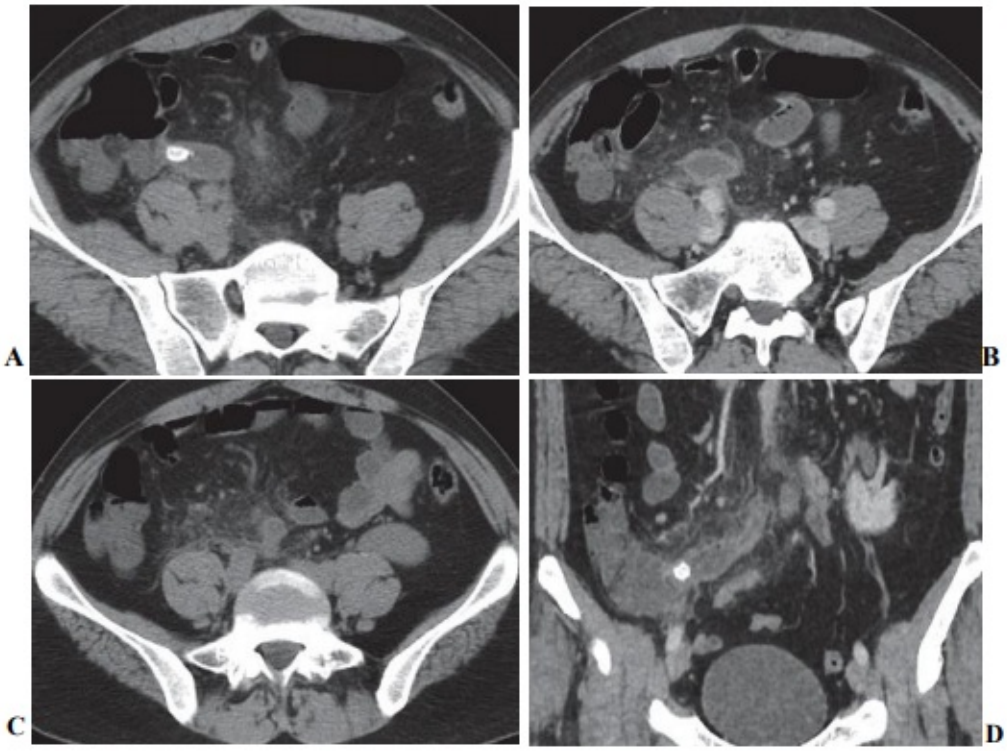
Diagnosis: Duodenal Carcinoma with Liver Metastases

Case 102

Clinical Presentation

A 38-year-old male patient with 3 days' history of right lower quadrant abdominal pain and nausea. The ultrasound examination was inconclusive.

Radiological Findings



Post-contrast abdominal CT scan, axial (A, B, C) with coronal reconstruction (D) images showing an appendicolith obstructing the proximal appendiceal lumen with increased diameter, thickened and enhanced wall of the appendix. Note inflammatory infiltration of the peri-appendiceal fat.

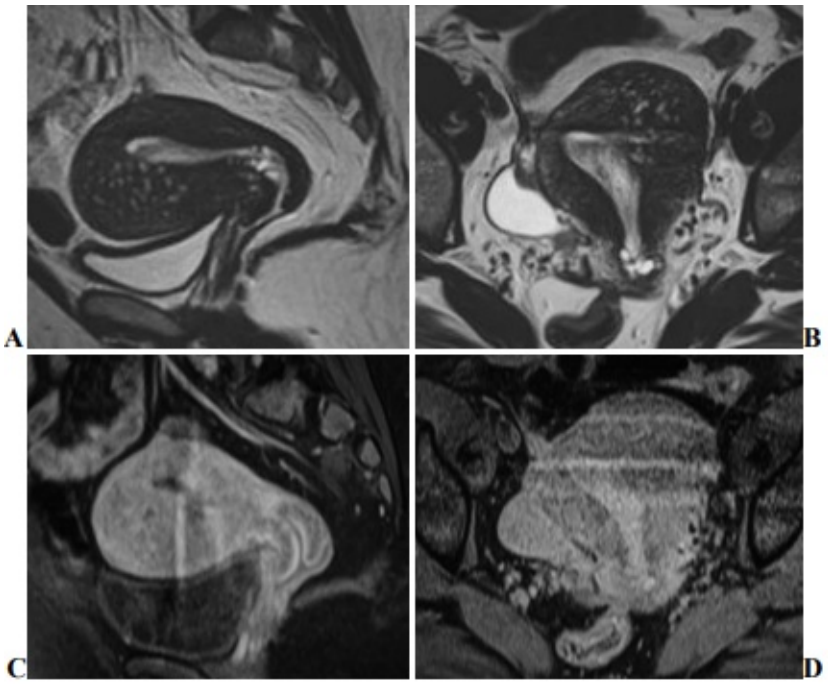
Diagnosis: Acute Appendicitis

Case 103

Clinical Presentation

A 34-year-old nulliparous woman presented to her gynaecologist with symptoms of dysmenorrhea, heavy bleeding, passing clots during the menstrual cycle, and fatigue for the past 6 months.

Radiological Findings



MR scan, sagittal / axial T2 (A, B), post-contrast sagittal / axial T1 fat saturation (C, D) images show an ill-defined myometrial lesion, representing a thickened junctional zone (> 16 mm) of low signal intensity on T2 in the anterior myometrium, containing an innumerable hyperintense foci embedded in the lesion. Sagittal and axial contrast- enhanced fat-suppressed delayed T1 images show an obliteration of the margin of the thickened junctional zone, a finding that is of no particular value in diagnosing adenomyosis.

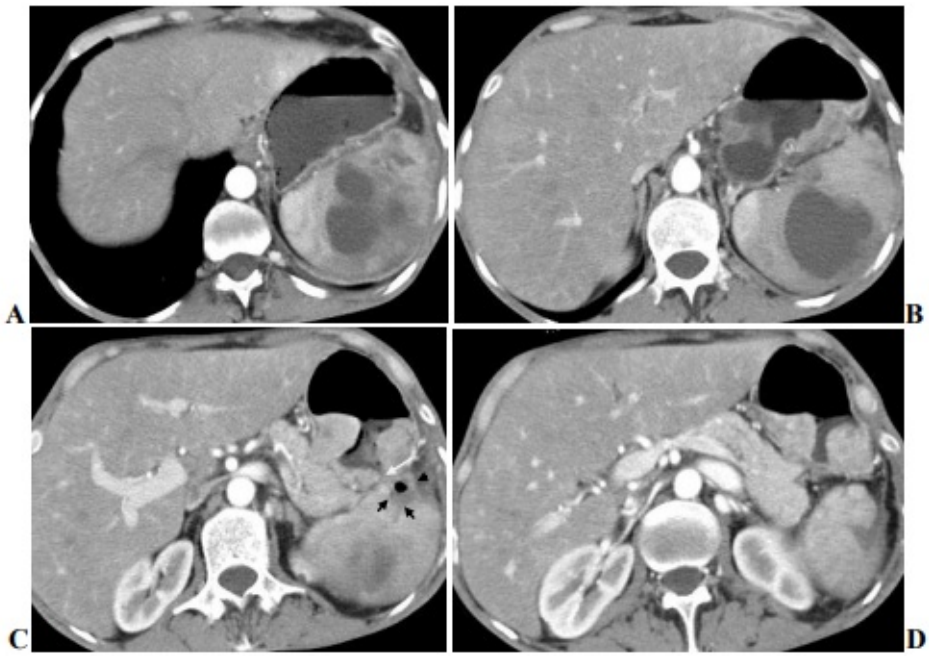
Diagnosis: Focal Adenomyosis

Case 104

Clinical Presentation

A 57-year-old man presented with 5 days' history of fever and left upper quadrant abdominal pain. The abdomen was mildly distended with tenderness in the left upper quadrant. Laboratory examination showed that the white blood cell count was 18,300/mm3. Abdominal ultrasound showed a hypoechoic mass of spleen.

Radiological Findings



Enhanced abdominal CT scan images reveal an irregular circumferential thickening of the gastric wall with focal perforation at the greater curvature (white arrow in C) and passage of air and gastric content into the gastrosplenic ligament (black arrowheads in C). The spleen is enlarged containing a lobulated multiseptated hypodense collection (abscess).

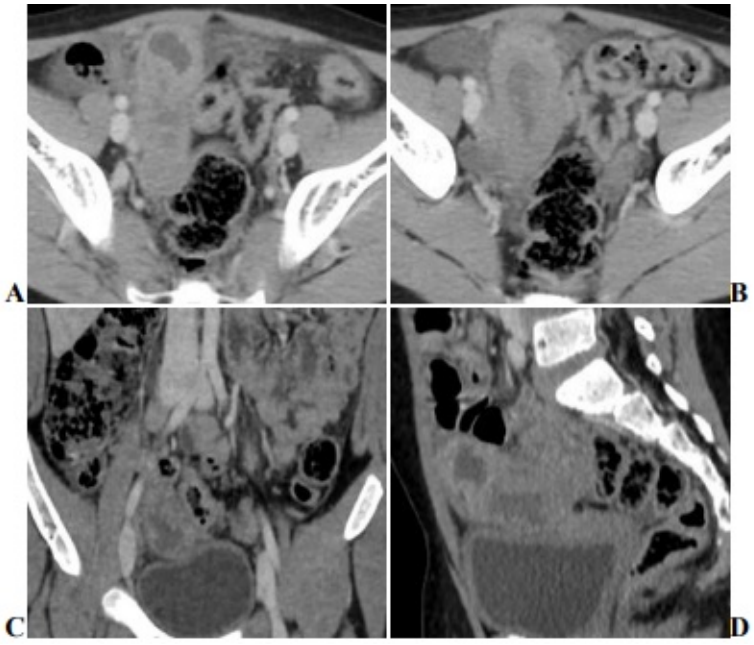
Diagnosis: Splenic Abscess secondary to Perforated Gastric Adenocarcinoma

Case 105

Clinical Presentation

A 6-year-old girl presented with 4 days' history of right lower abdominal pain. She had dull and aching pain in the same area for the last 3 to 4 months, which increased in severity and frequency over the last 1 month. There was associated nausea and vomiting. No history of fever, jaundice, loss of weight or change in bowel habit was present. The abdominal examination showed tenderness in the right iliac fossa. WBC count was 10.3 × 103/uL.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reformatted (C, D) images showing a long tubular blind mass with marked irregular mural thickening extending from the caecum to the right pelvic region with partially visualised lumen within the mass. Note mild peritoneal effusion with surrounding fat stranding. No enlarged perifocal lymph nodes seen.

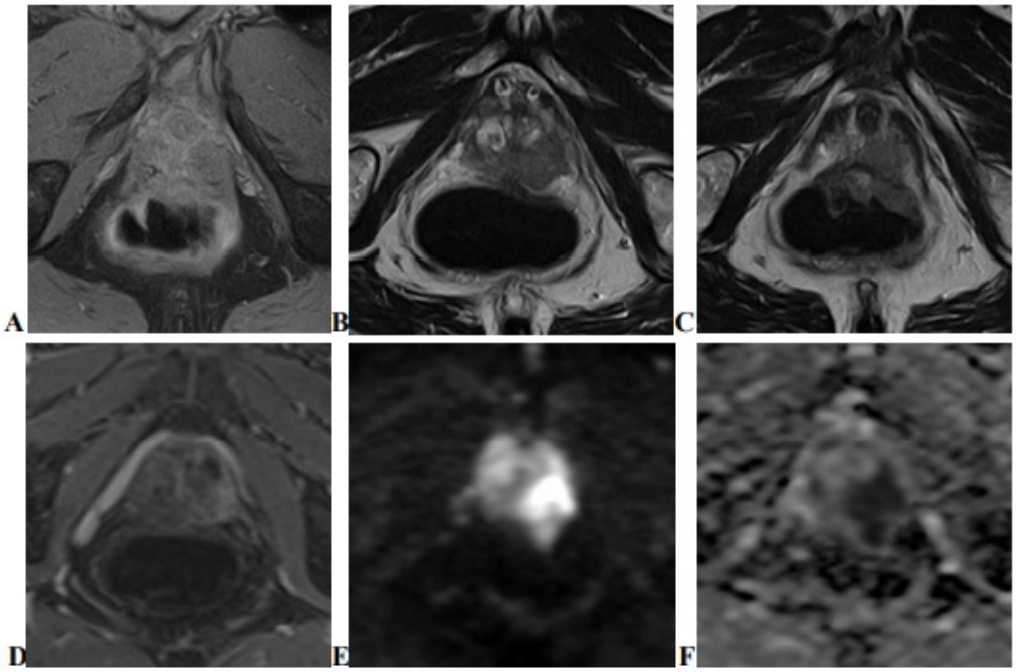
Diagnosis: Primary Burkitt's Lymphoma of the Appendix

Case 106

Clinical Presentation

A 68-year-old man presented with history of pelvic pain and pollakiuria. The digital rectal examination showed a hard, fixed and enlarged left lobe of prostate.

Radiological Findings



Prostatic MR scan, axial T1 fat saturation (A), axial T2 (B, C), post-contrast dynamic T1 fat saturation (D) and DWI (b800) / ADC Map (E, F) images showing a well-circumscribed mass of the left peripheral lobe (mid-zone and apex) measuring 19x12 mm of intermediate signal intensity on T1, hypointense on T2 with early enhancement on dynamic sequence. It appears hyperintense on high b-value DWI and markedly hypointense on ADC suggesting high cellularity. Note an extra-capsular extension with involvement of the adjacent rectal wall.

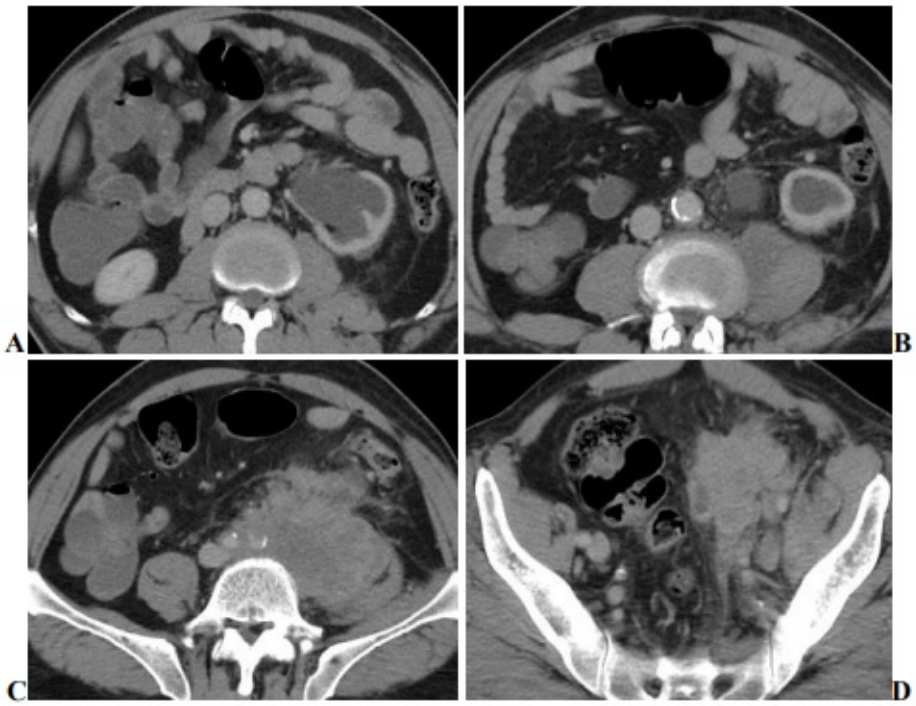
Diagnosis: Prostatic Lesion PI-RADS 5

Case 107

Clinical Presentation

An 85-year-old man with history of neglected left flank pain.

Radiological Findings



Enhanced abdominal CT scan images reveal a large retroperitoneal heterogeneously enhancing soft tissue mass of irregular contours with central necrotic areas, in contact with the left psoas muscle, encasing the aortic bifurcation, left iliac vessels and adjacent segment of the left ureter with left hydronephrosis and paraortic / iliac lymph nodes enlargement. Note an intraperitoneal extension infiltrating the mesenteric fat. No bony lesion seen on bone window (not shown).

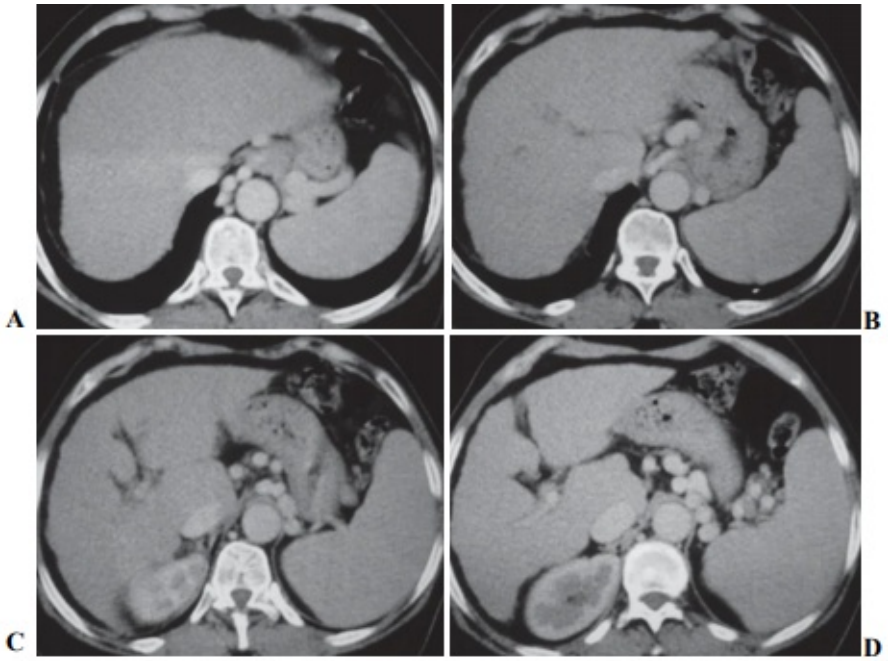
Diagnosis: Primary Retroperitoneal Sarcoma

Case 108

Clinical Presentation

A 66-year-old woman known case of hepatitis C presented with epigastric pain and hematemesis.

Radiological Findings



Post-contrast Abdominal CT scan images showing a dysmorphic liver with atrophied segment IV and hypertrophied segment I. Irregular surface margin with homogeneous enhancement and no focal liver lesion seen. Enlarged spleen with multiple varices seen in the epigastric and perisplenic regions, indicating portal hypertension.

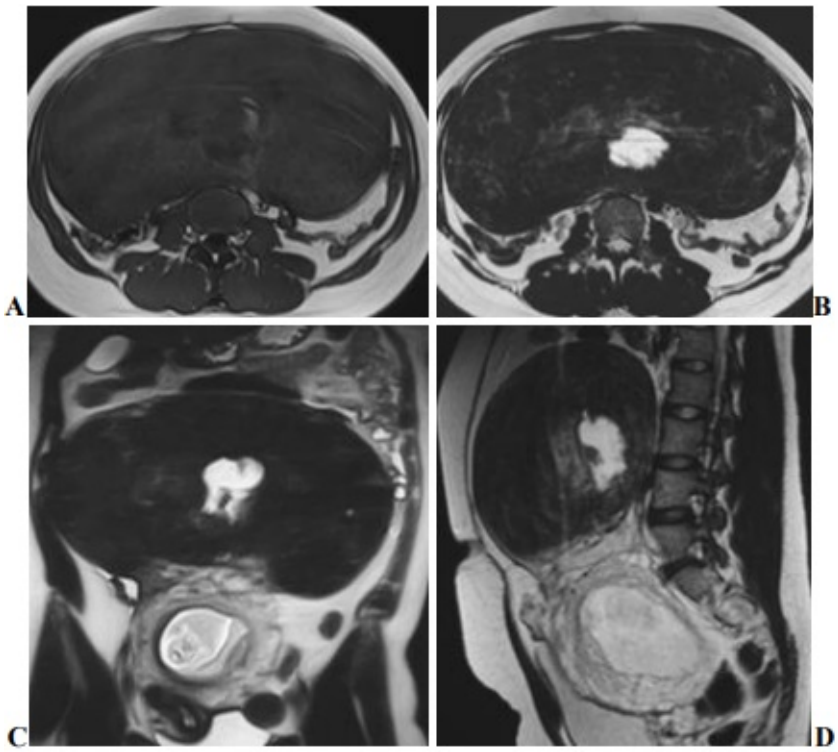
Diagnosis: Liver Cirrhosis with Portal Hypertension

Case 109

Clinical Presentation

A 32-year-old pregnant patient (13 weeks) presented with complaints of mass in her abdomen of 1-year duration with epigastric pain. On physical examination, her abdomen was distended with a huge mass to a pregnancy size of 34 weeks arising from the pelvis. This mass was mobile, non-tender and firm to hard in consistency with bumpy surfaces.

Radiological Findings



MR scan, axial T1 (A), axial / coronal / sagittal T2 (B, C, D) images show a huge well-circumscribed supra-uterine oval mass with broad-based and obtuse angles with the uterus and exhibiting intermediate signal intensity on T1, low signal intensity on T2 with central area of low signal on T1 and high signal on T2 (myxoid degeneration). Note intrauterine gestational sac with foetus.

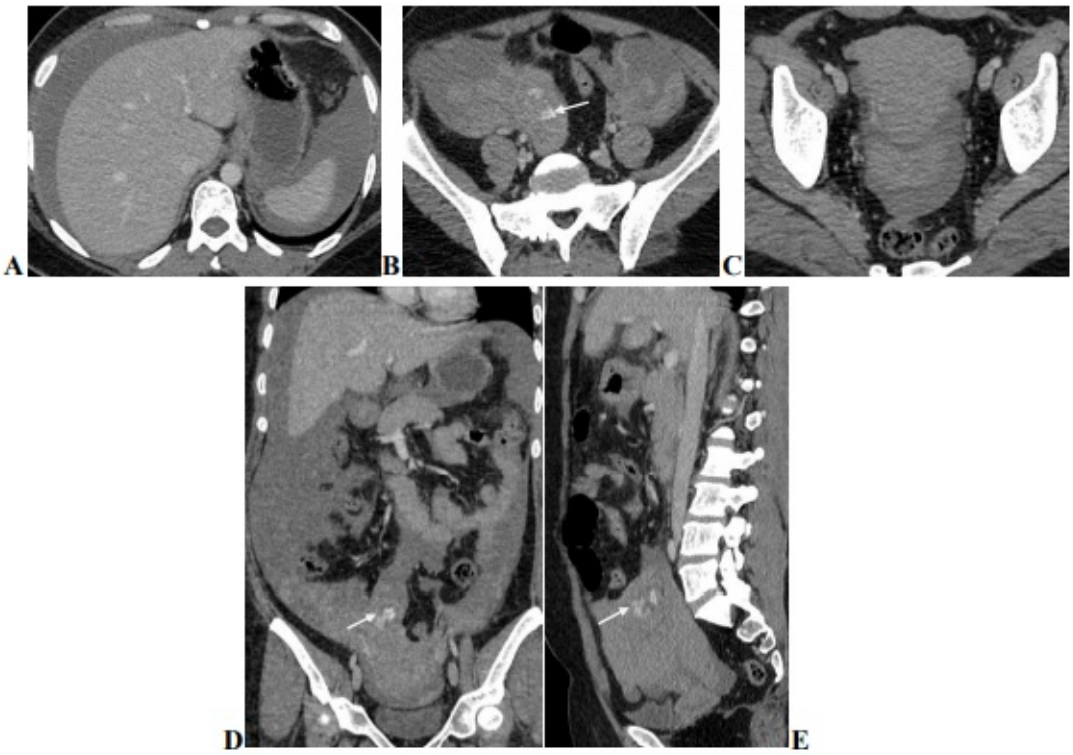
Diagnosis: Large Sessile Subserosal Fibromyoma with Central Myxoid Degeneration in pregnant patient

Case 110

Clinical Presentation

A 36-year-old woman was admitted to the emergency department with an acute, sharp abdominal and pelvic pain. She had 3 days' history of symptoms like nausea, sickness and vomiting with paleness, weakness and fainting. During a physical examination, hypovolemic shock symptoms were found, together with clear peritoneal signs. Laboratory tests showed anaemia (RBC – 1.90 mln/mm3, Hb – 6.5 g/dL, Ht – 23.5%). *β-HCG* not done.

Radiological Findings



Enhanced abdominopelvic CT scan, axial (A, B, C) with coronal / sagittal reconstruction (D, E) images showing a large amount of fluid in the peritoneal cavity with foci of high density mainly in the pelvic region characterising haematic content. The clotted component of a haemoperitoneum which has a higher attenuation on CT (45-60 HU) is likely to be found near the source of bleeding and this is known as the sentinel clot sign as in this case. Note a right adnexal mass containing a high-attenuation foci (arrow in B, D and E). This patient was operated shortly after the scan. Per operatively a ruptured ectopic pregnancy in the right fallopian tube was found.

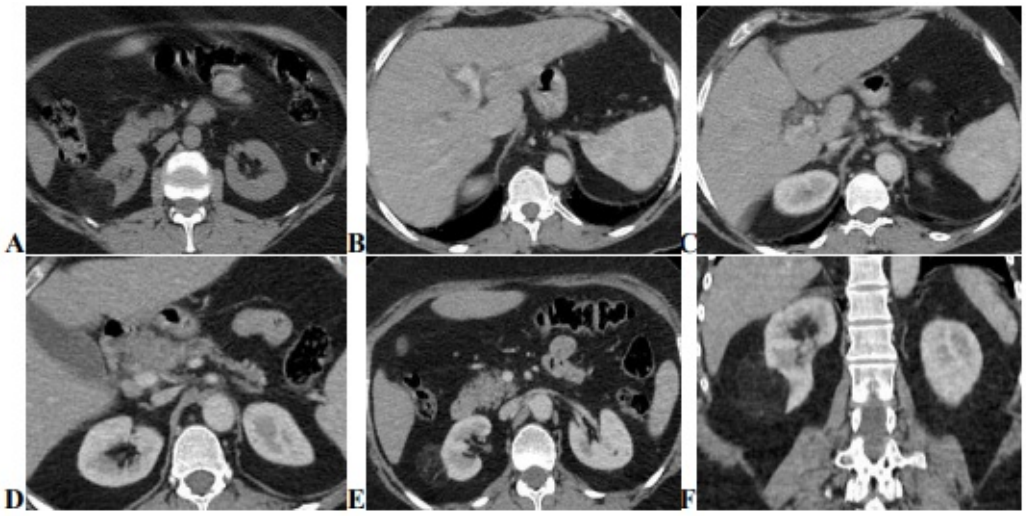
Diagnosis: Ruptured Ectopic Pregnancy

Case 111

Clinical Presentation

A 65-year-old woman presented with upper abdominal pain, jaundice and loss of appetite.

Radiological Findings



Pre-(A) and post-contrast (B, C, D, E) with coronal reconstruction (F) images reveal a mild dilatation of the intra-and extrahepatic ducts as well as the pancreatic duct with atrophied corporeocaudal segment of the pancreas and presence of small heterogeneously enhancing mass of the pancreatic head (image D). The right kidney shows a predominantly fat attenuating circumscribed exophytic mass with small vessels supplying the angiomyolipomatous lesion from the renal parenchymal (images E and F). This mass is abutting the lateral aspect of the kidney with a cortical defect of the renal parenchyma in continuity with the mass. No internal enhancing nodules were seen.

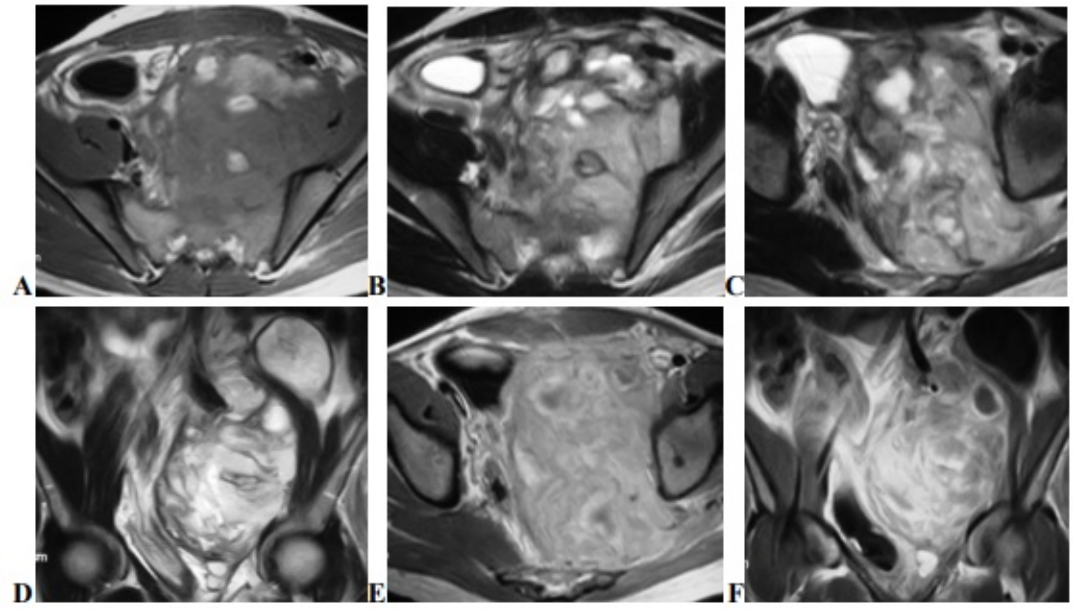
Diagnosis: Renal Angiomyolipoma in patient with Pancreatic Adenocarcinoma

Case 112

Clinical Presentation

A 25-year-old male presented with 2 years' history of neglected pain in the left lower limb with episodes of urinary retention.

Radiological Findings



MR scan, axial T1 (A), axial / coronal T2 (B, C, D) and post-contrast axial / coronal T1 (E, F) images demonstrating a huge left pelvic retroperitoneal mass of intermediate signal intensity on T1 with areas of high signal (haemorrhage), heterogeneous signal intensity on T2 with moderate heterogeneous enhancement after gadolinium administration. This tumoural process shows extension to adjacent sacral foramina and the sciatic notch, compressing the sciatic nerve, compressing and displacing the urinary bladder and rectum to the right. Note encasement of the left iliac vessels which remain patent. The left gluteal muscles appears atrophied with fatty degeneration (signs of denervation).

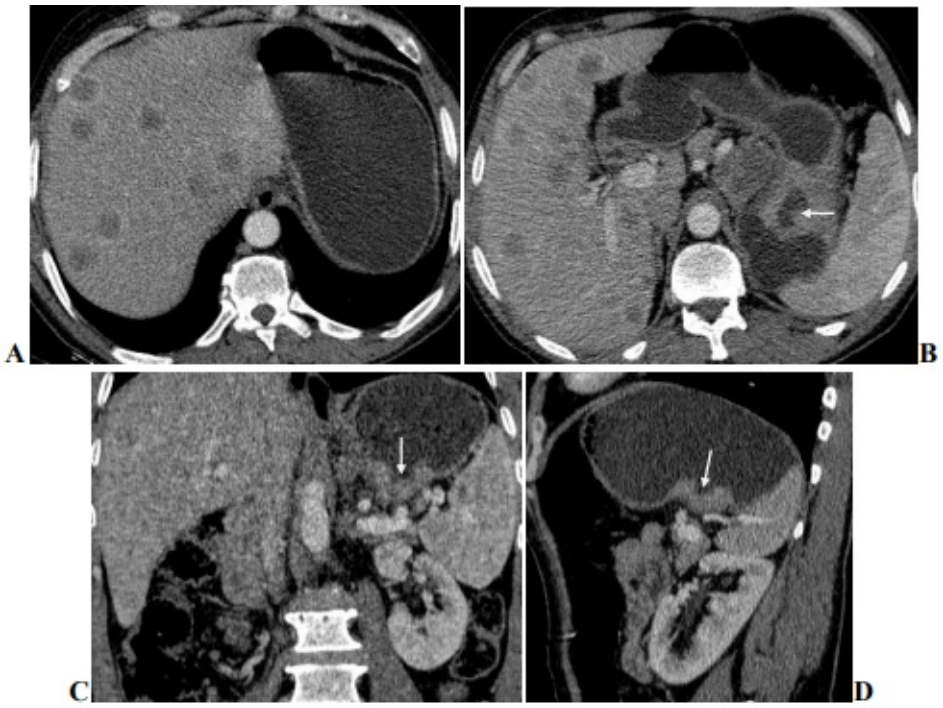
Diagnosis: Malignant Schwannoma

Case 113

Clinical Presentation

A 60-year-old man presented with 6 months' history of epigastric pain, nausea, vomiting, hematemesis, loss of appetite and weight loss.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images reveal a focal irregular thickening of the subcardial gastric wall with central ulcerative features (arrow in C and D). Stomach has been distended by water. Multiple solid, low-attenuation lesions within the liver, consistent with metastatic disease. Note that some lesions present a more hypodense centre, probably representing areas of necrosis. Note enlarged gastrohepatic lymph nodes (image B).

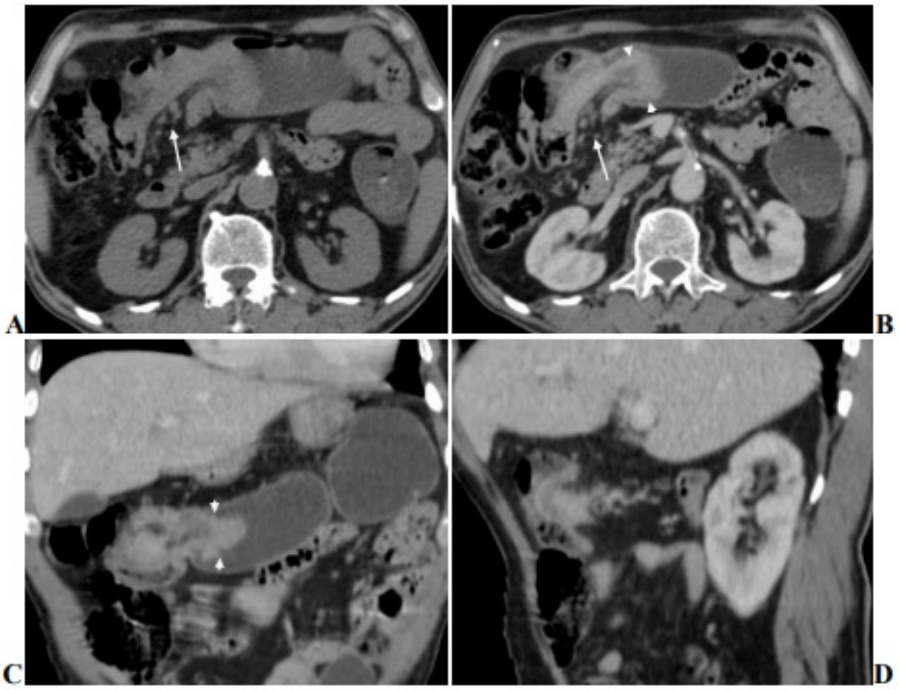
Diagnosis: Gastric Adenocarcinoma with Liver Metastases (stage IV / T3N1M1)

Case 114

Clinical Presentation

A 78-year-old male with no significant medical history admitted in the surgical department with history of sudden abdominal pain and vomiting with 3 episodes of bright-red bloody stool. Physical examination revealed mild abdominal distension and tenderness.

Radiological Findings



Abdominal CT scan (with per-rectal colonic opacification) pre-(A) and post-contrast (B) with coronal / sagittal reformatted (C, D) images demonstrate the classic findings of a lead point colocolic intussusception (arrowheads in B and C) of the transverse colon with invaginated mesenteric fat, vessels and enlarged pericolic lymph nodes (arrow in A and B). Note the tumour that serves as a lead point originates in the intussusceptum while the intussuscipien is distended by the colonic opacification.

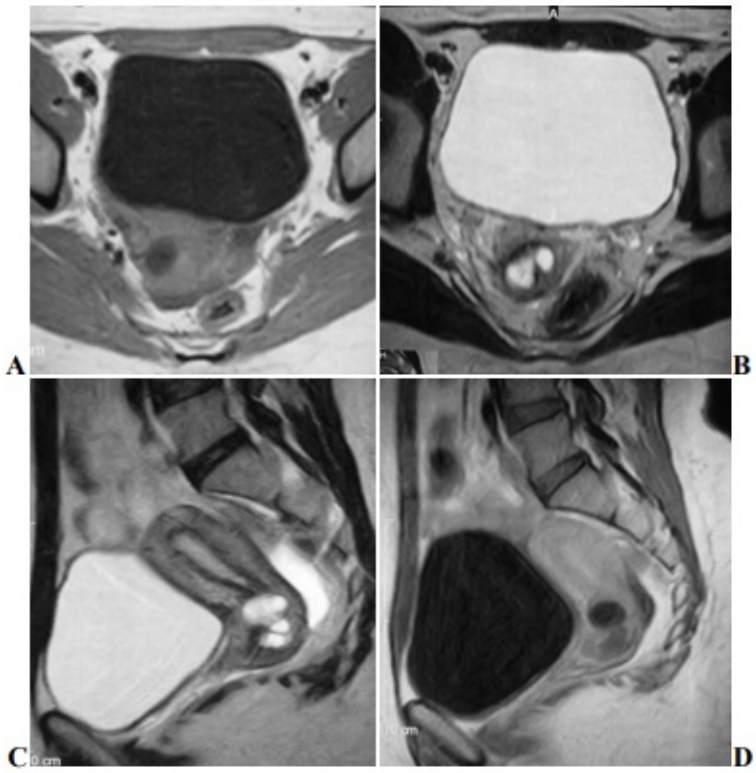
Diagnosis: Colocolic Intussusception secondary to Transverse Colon Adenocarcinoma

Case 115

Clinical Presentation

A 29-year-old female patient with history of menometrorrhagia. A pelvic ultrasound done revealed small masses in the internal os.

Radiological Findings



Pelvic MR, pre-contrast axial T1 (A), axial / sagittal T2 (B, C) and post-contrast sagittal T1 (D) images revealed multiple well-circumscribed cystic lesions within the cervical stroma of low signal intensity on T1, high signal intensity on T2 with no associated enhancement after gadolinium administration. The endometrium and myometrium show normal thickness and signal intensity.

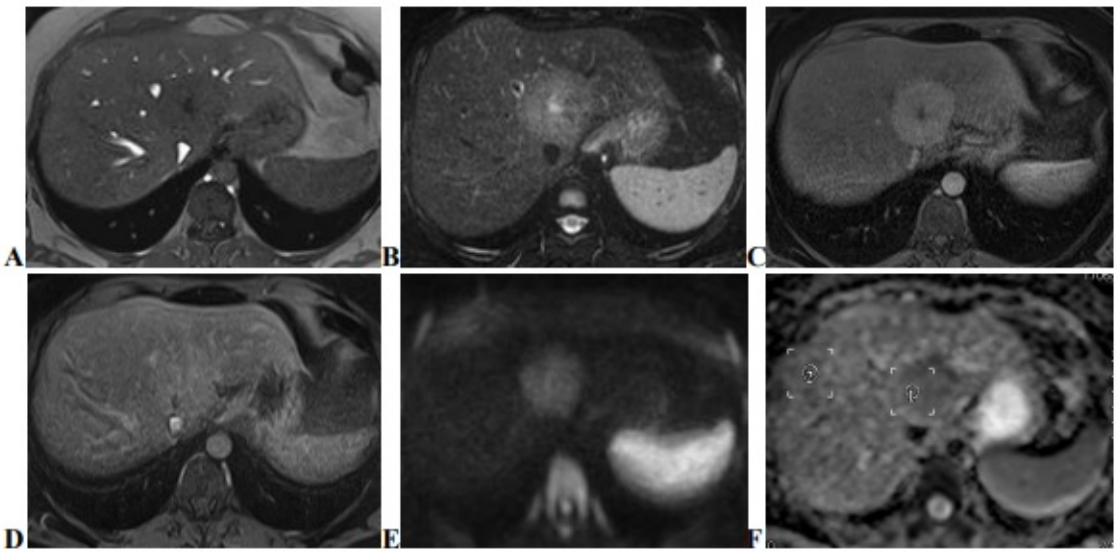
Diagnosis: Nabothian Cysts (also known as retention cysts of the cervix)

Case 116

Clinical Presentation

A 32-year-old woman had routine abdominal ultrasound before surgery for abdominal wall hernia and showed a liver mass.

Radiological Findings



MR scan, axial T1 GE in-phase (A), T2 fat saturation (B), axial post-contrast arterial phase (C), portal phase (D) and DWI / ADC (E, F) images showing a rounded well-circumscribed lesion located in the segment IV. It appears iso to moderately hypointense on T1 with hypointense central scar, somewhat hyperintense T2 with hyperintense central scar, intense early arterial phase enhancement (arterialisation) with exception of the central fibrotic scar, isointense to the liver on portal venous phase (hepatisation), with enhancement of the central scar on delayed images (not shown). On DWI the lesion shows high signal with an ADC values approximately 1.66 × 10−3 mm2/sec and for normal liver was 1.64 × 10−3 mm2/sec (ADC value for each FNH and the normal liver was not statistically different).

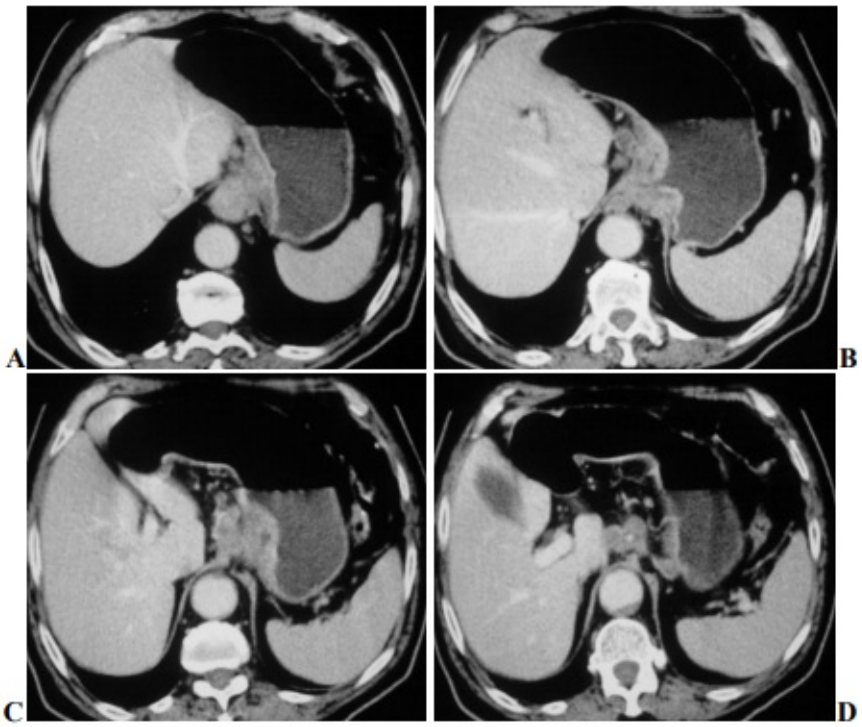
Diagnosis: Focal Nodular Hyperplasia (FNH)

Case 117

Clinical Presentation

An 82-year-old male patient complaining of epigastric pain and dysphagia.

Radiological Findings



Post-contrast abdominal CT scan images show a heterogeneously enhanced soft tissue mass at the oeso-cardial region with enlarged lymph nodes at the lesser omentum and coelio-mesenteric region. The rest of the CT scan examination was normal.

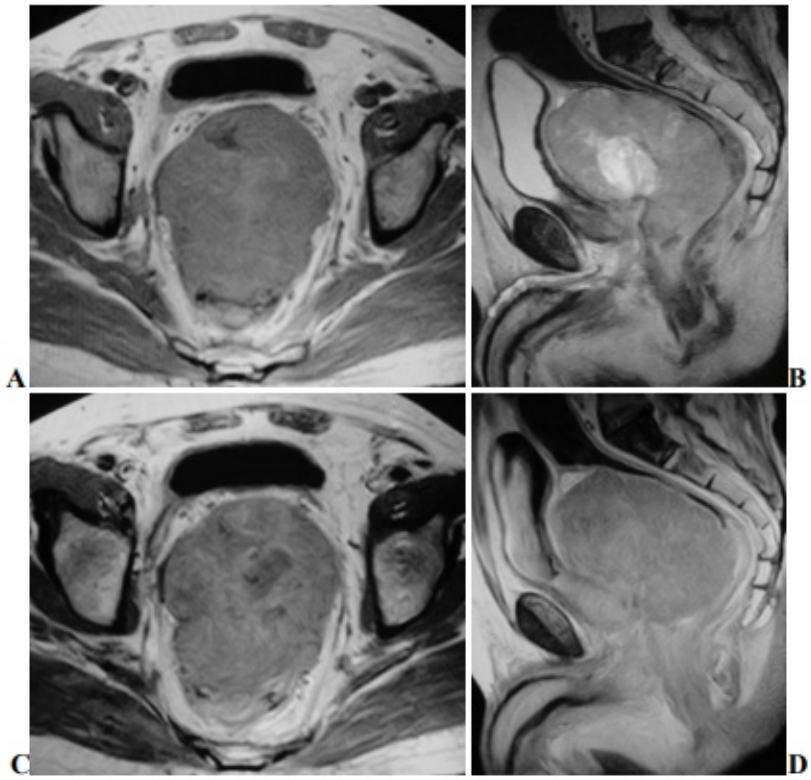
Diagnosis: Oeso-cardial Epidermoid Carcinoma with Enlarged lymph nodes

Case 118

Clinical Presentation

A 74-year-old male patient presented with 1 and a ½ year history of rectal pain, weight loss of 18 kg and change in bowel habits.

Radiological Findings



Pelvic MR, axial T1 (A), sagittal T2 (B), axial and sagittal (C, D) post-contrast T1 images showing a large soft tissue mass with irregular contours, arising mainly from the anterior rectal wall. This soft tissue mass is of intermediate signal intensity on T1, slightly high signal intensity on T2 with central necrotic area and shows moderate heterogeneous enhancement after gadolinium administration. The mesorectum is infiltrated as well as the fascia recti at 14 o'clock. Note small regional right pelvic lymphadenopathy (image A).

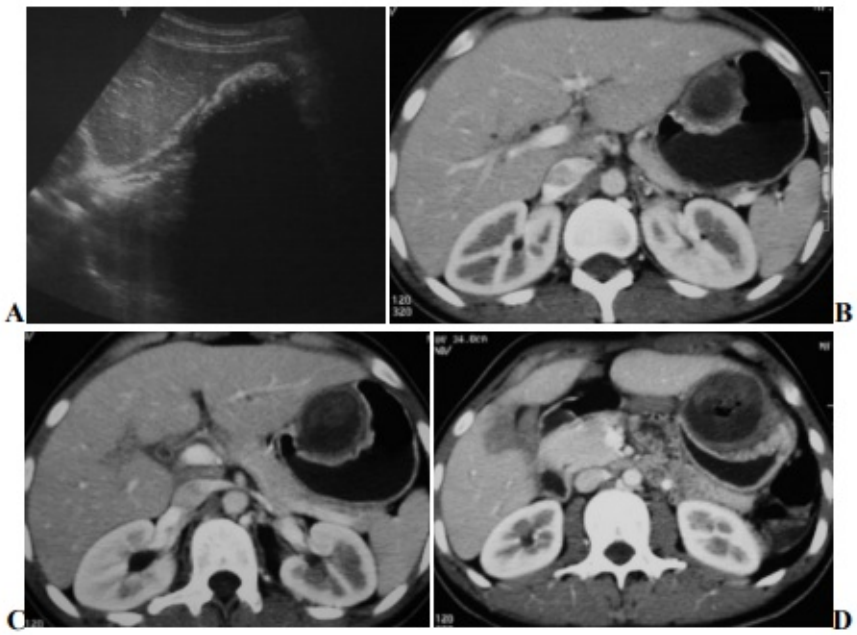
Diagnosis: Rectal Mucinous Carcinoma

Case 119

Clinical Presentation

A 23-year-old female patient had cholecystectomy 3 months ago for cholilithiasis, presenting a left hypochondrial pain since 1 month, not improving with treatment.

Radiological Findings



Ultrasound image (transverse section at epigastric region) showing an echogenic structure with posterior shadowing in the lesser sac. **Enhanced CT scan images** demonstrate an ovoid hypodense structure with heterogeneous content in the gastro-hepatic ligament. The rest of the CT examination was unremarkable.

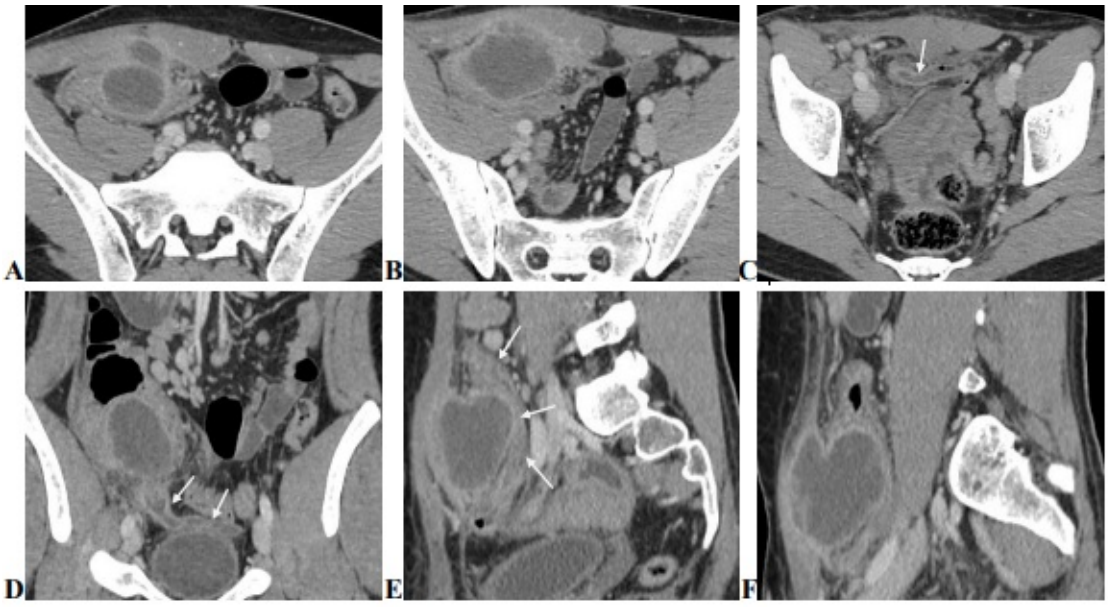
Diagnosis: Textiloma (Gossypiboma) in the Lesser Sac

Case 120

Clinical Presentation

A 22-year-old man with 10 days' history of abdominal pain at the right iliac fossa with fever and hyperleukocytosis 29500/mm3.

Radiological Findings



Enhanced pelvic CT scan, axial (A, B, C) with coronal / sagittal reconstruction (D, E, F) images. The appendix is of retrocecal origin, extending to the pelvic region, dilated with thickened enhancing wall (arrow in C, D, E). Note large hypodense collection with enhancing wall in the right iliac fossa, extending to the abdominal wall with inflammatory infiltration of the mesentery and adjacent reactional lymphadenopathy.

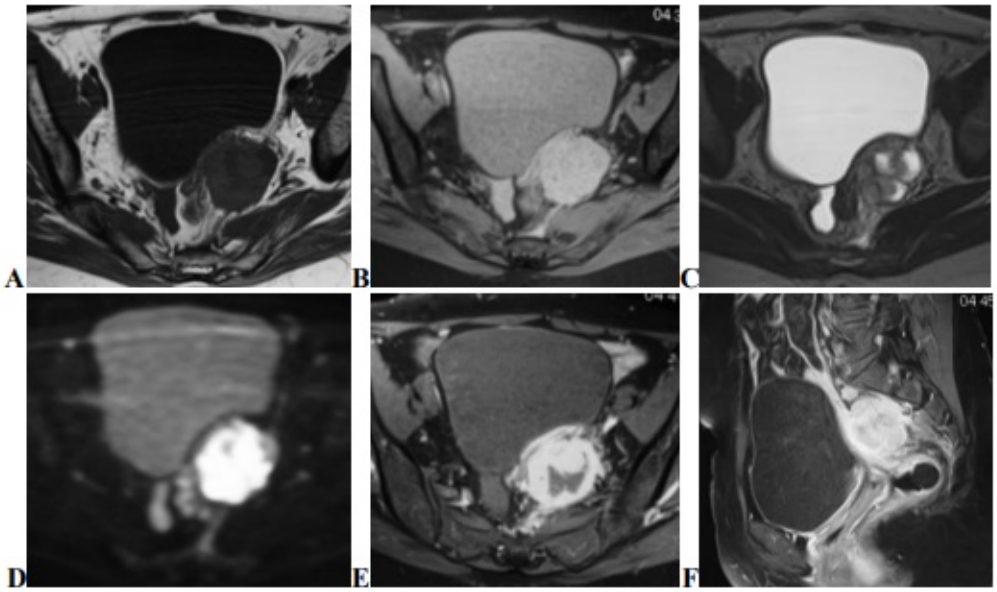
Diagnosis: Appendiceal Abscess secondary to an Acute Appendicitis

Case 121

Clinical Presentation

A 52-year-old female patient operated 3 years ago for malignant left ovarian tumour had total hysterectomy and bilateral adnexectomy. Now elevated tumoural markers.

Radiological Findings



Pelvic MR scan, axial T1 (A) / T1 fat-saturation (B), axial T2 (C), Diffusion b 400(D) and post-contrast axial / sagittal (E, F) T1 fat-saturation images revealed a left paramedian retrovesical soft tissue mass of intermediate signal intensity with central low signal area on T1, heterogeneous high signal intensity on T2 with restricted diffusion and intense enhancement after gadolinium administration except the central necrotic area. Note infiltration of the mesorectum with subtle pelvic effusion.

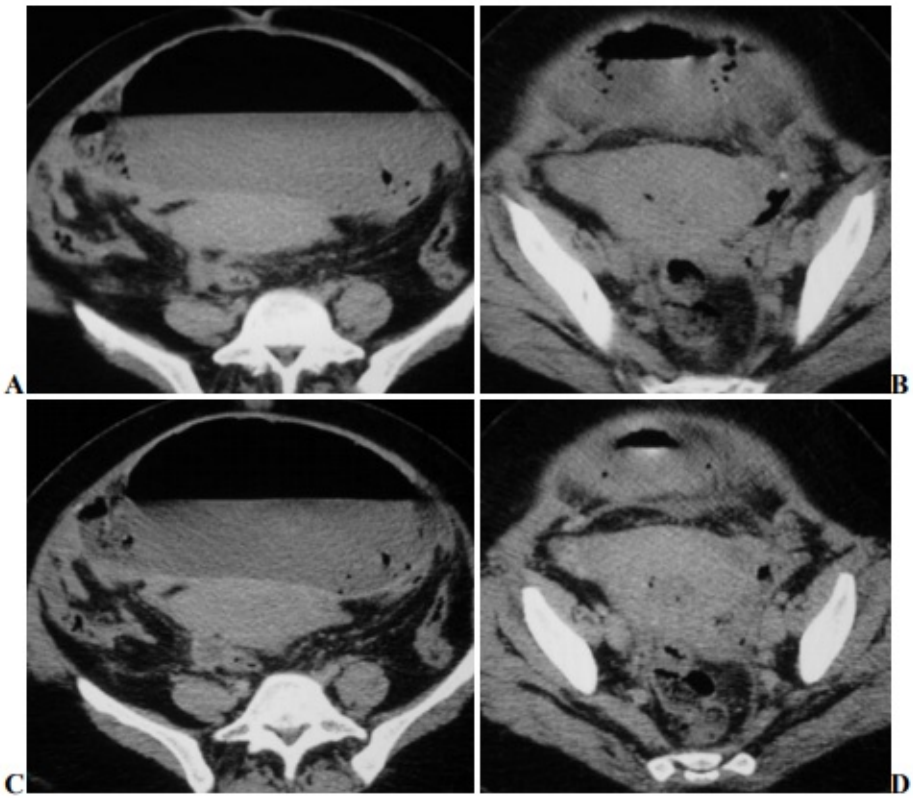
Diagnosis: Recurrent Ovarian Tumour

Case 122

Clinical Presentation

A 35-year-old female patient had curettage 1 month ago presented with abdominal pain, tenderness and fever.

Radiological Findings



Non-enhanced Pelvic CT images showing a large supra-uterine collection with air-fluid level and surrounding inflammatory fat stranding. The uterus is enlarged with an uterine cavity containing fluid collection with air bubbles.

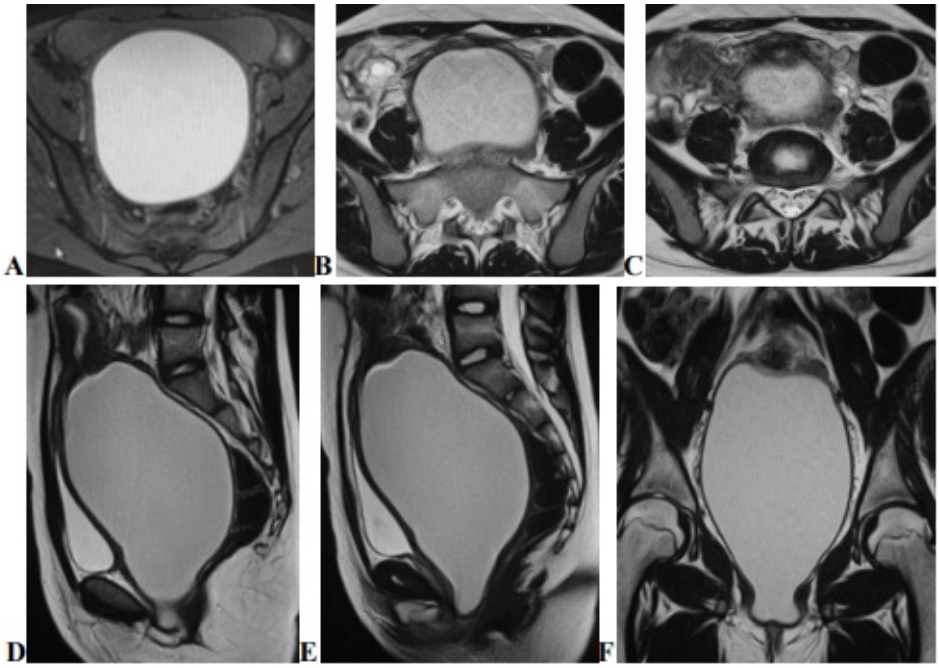
Diagnosis: Endometritis with Large supra-uterine abscess Complicating a Post-Curettage Uterine Perforation

Case 123

Clinical Presentation

A 13-year-old female presented with history of cyclic lower abdominal pain of 3 months' duration. There was no history of attainment of menarche. Physical examination revealed a tender midline mass in the supra-pubic region and normal external genitalia. There was bulging of hymen. On rectal examination, there was bulging of upper vagina towards the rectum.

Radiological Findings



MR scan, axial T1 fat saturation (A) and axial / sagittal / coronal T2 (B, C, D, E, F) images show distended vagina filled with fluid of high signal intensity on T1 fat saturation image in keeping with blood products (haematocolpos). The uterus is well-visualised on sagittal T2 (image D) and appears normal. Note also both ovaries are visible on axial T2 (images, B and C).

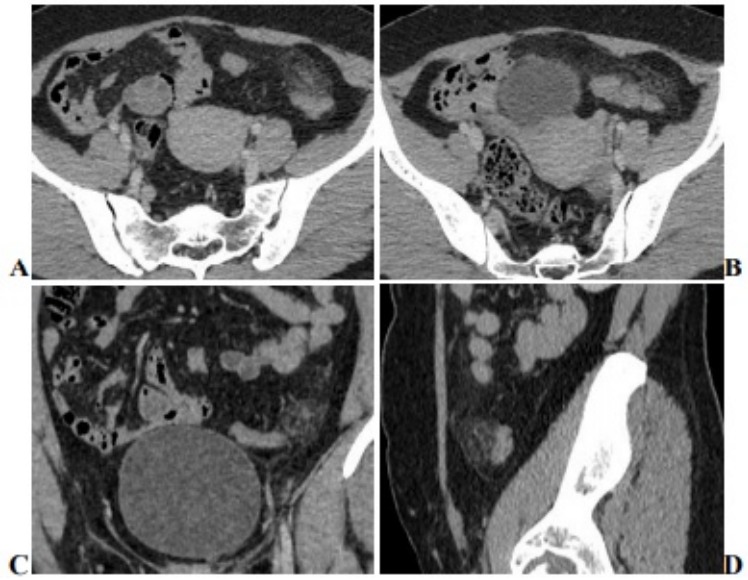
Diagnosis: Imperforate Hymen with Haematocolpos

Case 124

Clinical Presentation

A 33-yearold woman presented to the ER with constant sharp pain in the left iliac fossa. Vital signs and abdominal examination were unremarkable. She was discharged with simple analgesic medication because the pain appeared to improve. However, she represented to the ER within 24 hours of discharge, with constant pain, tenderness and guarding in the left iliac fossa. The patient was afebrile and blood tests, including white cell count, were unremarkable. Abdominal radiograph revealed no evidence of bowel obstruction or free air.

Radiological Findings



Enhanced CT scan of the pelvis, axial (A, B) with coronal/ sagittal reconstruction (C, D) images showing a fatty density ovoid structure adjacent to the anterior serosal surface of the sigmoid colon and has slightly higher attenuation than peritoneal fat with surrounding inflammatory fat stranding. Note a central hyperdense dot (in A and C), possibly caused by a thrombosed vessel in the epiploic appendix.

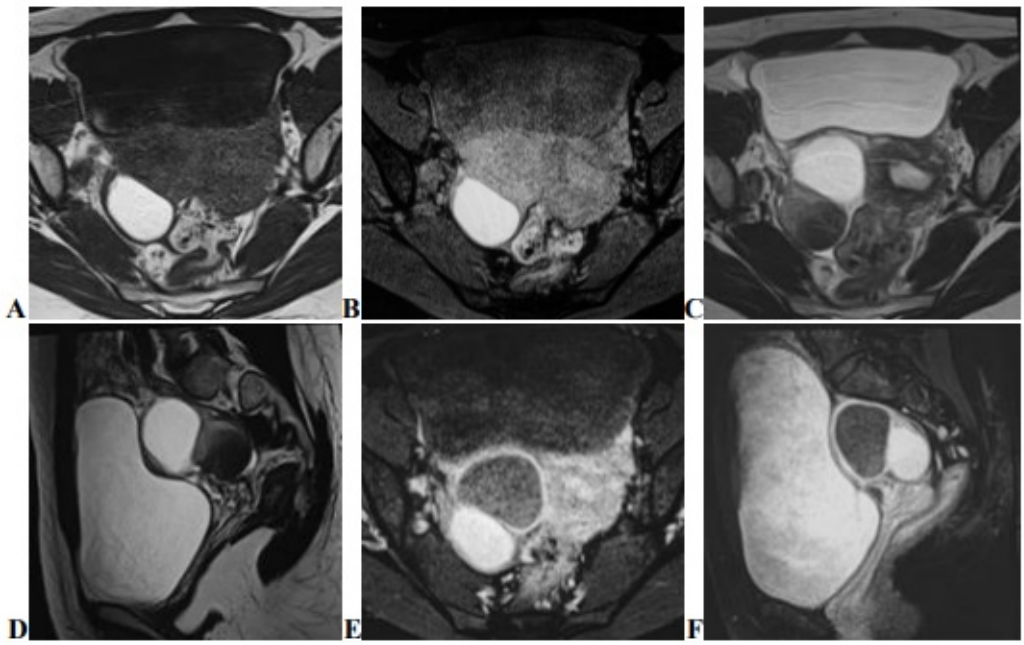
Diagnosis: Acute Epiploic Appendagitis

Case 125

Clinical Presentation

A 29-year-old patient with history of cramping and pelvic pain during her menstrual period that's far worse than usual and increasing over time.

Radiological Findings



MR scan, axial T1 / T1 fat saturation (A, B), axial / sagittal T2 (C, D) and post- contrast axial / sagittal T1 fat saturation (E, F) images. The right ovary shows two well-circumscribed contiguous cystic lesions, the first one is of low signal on T1, high signal on T2 with small fluid-fluid level and peripheral regular enhancement after gadolinium administration (haemorrhagic cyst). The second cystic lesion is of high signal on T1 / T1 fat saturation, low signal with shading sign on T2 and doesn't show any peripheral enhancement after gadolinium administration (endometrioma). The uterus and left ovary were normal.

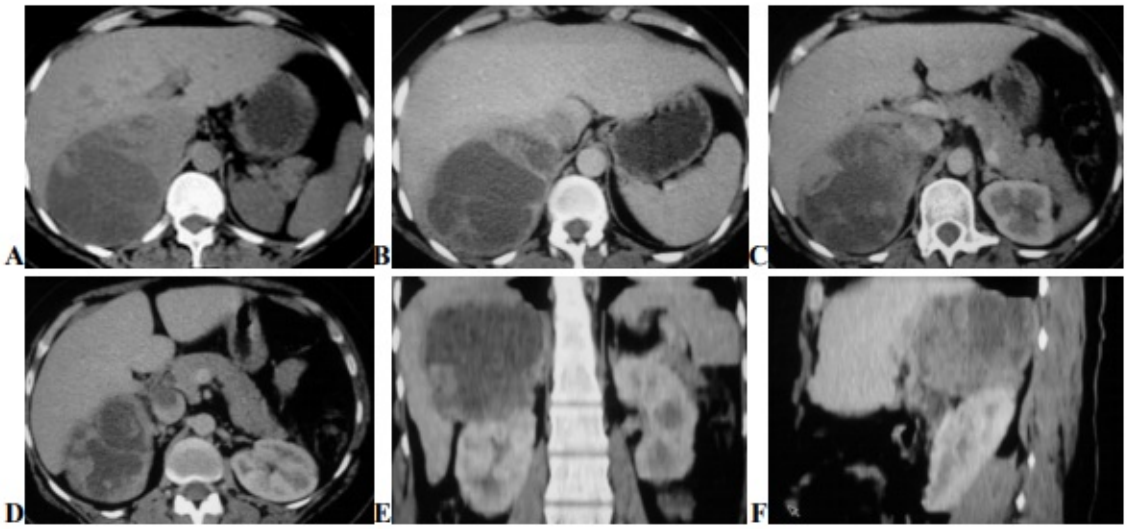
Diagnosis: Ovarian Endometrioma with Coexisting Haemorrhagic Cyst

Case 126

Clinical Presentation

A 37-year-old female patient with 1-month history of right upper abdominal pain. Abdominal ultrasound showed right upper abdominal mass of renal or adrenal origin.

Radiological Findings



Abdominal CT scan, pre-(A) post-contrast axial (B, C, D), with coronal / sagittal reconstruction (E, F) images showing a large right suprarenal mass of irregular margins with large central necrotic area and inhomogeneous enhancement of the solid component. Note hypodense material is seen within the adjacent segment of the IVC (tumoural thrombus, images C, D). The posteroinferior aspect of the liver is displaced anteriorly and the upper pole of right kidney inferiorly. The left adrenal gland shows normal size, shape and enhancement.

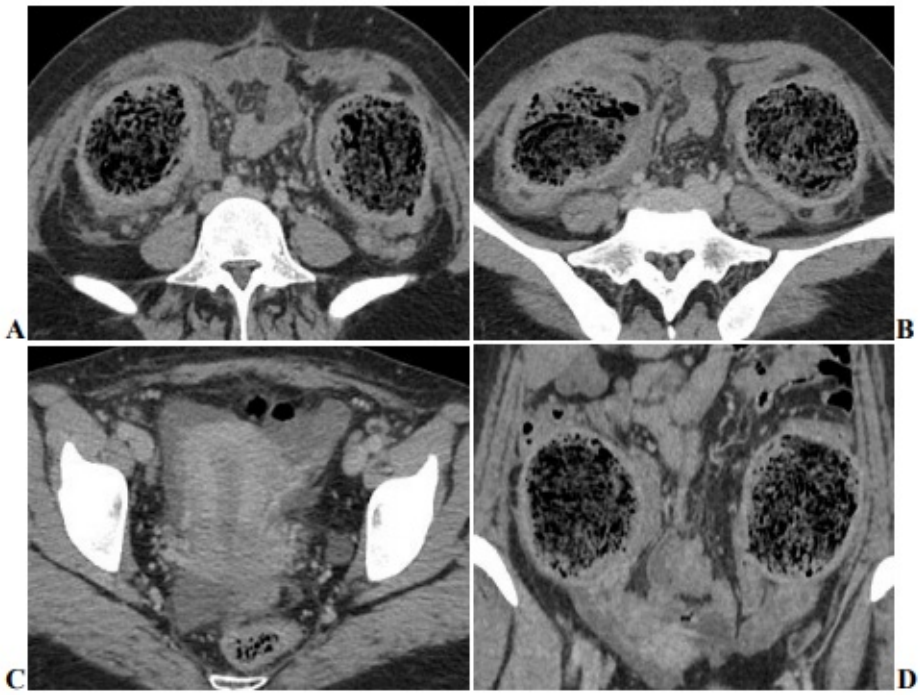
Diagnosis: Adrenocortical Carcinoma with tumoural thrombus in IVC

Case 127

Clinical Presentation

A 22-year-old woman had caesarean section 2 months ago presented with lower abdominal pain.

Radiological Findings



Enhanced pelvic CT scan, axial (A, B, C) with coronal reconstruction (D, E, F) images showing two circumscribed encapsulated masses in the iliac fossa with entrapped air bubbles, characteristic radiologic spongiform feature of a missed laparotomy pads. The masses have well-defined enhancing wall with perifocal fat stranding and mild pelvic effusion.

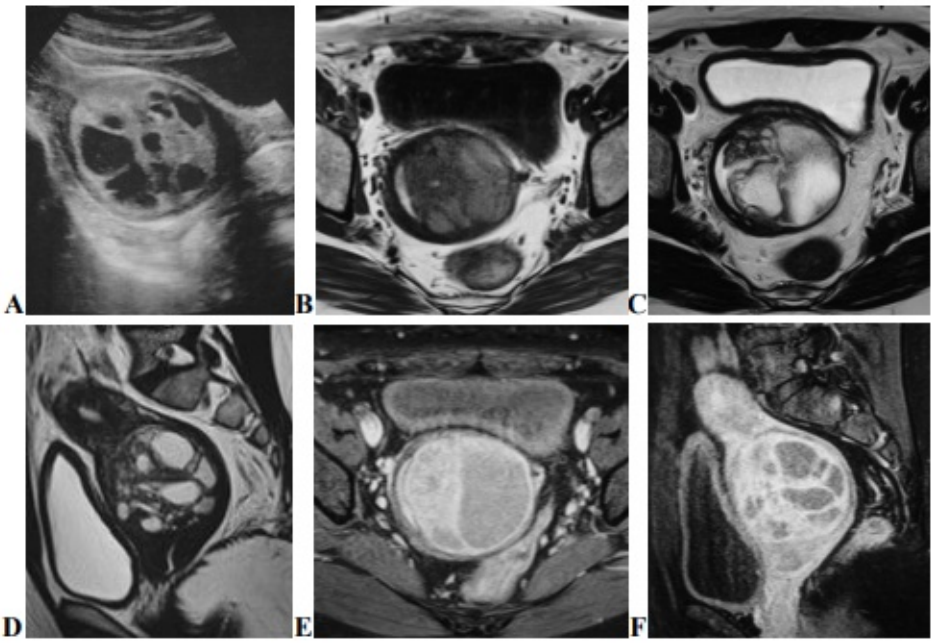
Diagnosis: Textilomas (Gossypibomas) after Caesarean Section

Case 128

Clinical Presentation

A 37-year-old woman presented with 4 months' history of lower abdominal pain. She had a past history of pregnancy 3 years back. Her abdominopelvic ultrasound at that time revealed a pelvic mass, either a fibroid or ovarian. A pelvic USG and MR scan were performed.

Radiological Findings



Pelvic ultrasound, longitudinal section (A) and MR scan, axial T1 (B), axial/ sagittal T2 (C, D) and post-contrast axial / sagittal T1 fat saturation (E, F) images. The ultrasound image shows a well-circumscribed intrauterine echogenic oval mass containing anechoic cystic areas. On MR this mass is located in the left lateral myometrium with right lateral displacement of the endometrial stripe. The cystic areas within the mass appear of high signal intensity on T1 and T2 with thick enhanced septa.

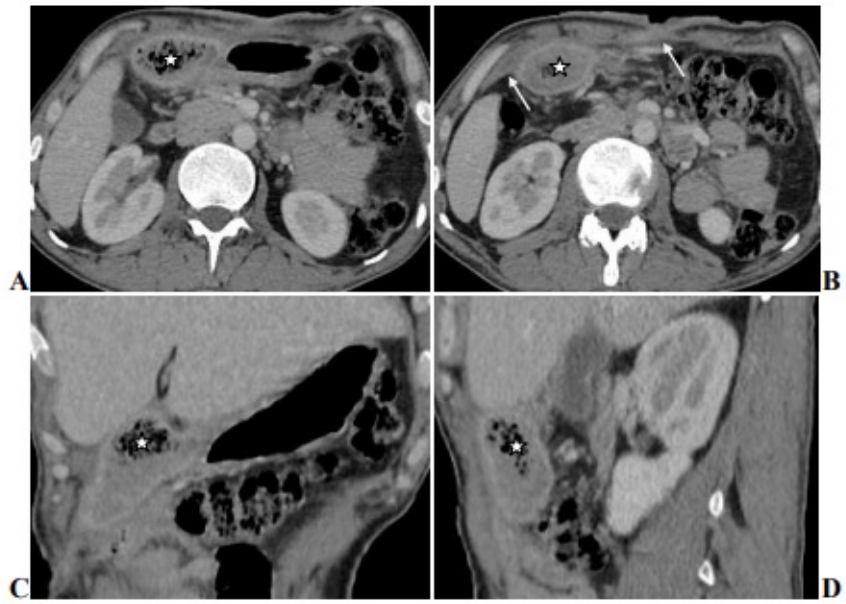
Diagnosis: Cystic Degeneration in Uterine Leiomyoma

Case 129

Clinical Presentation

A 32-year-old man had midline laparotomy 4 months ago for appendicular peritonitis presented with purulent discharge from the midline scar and fever.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images showing a subhepatic collection containing small gas bubbles suggestive of textiloma/gossypiboma (star in A, B, C, D). Note small subperitoneal fluid collection fistulised to the midline scar (arrows in B). The presence of a retained gauze was confirmed in revision laparotomy.

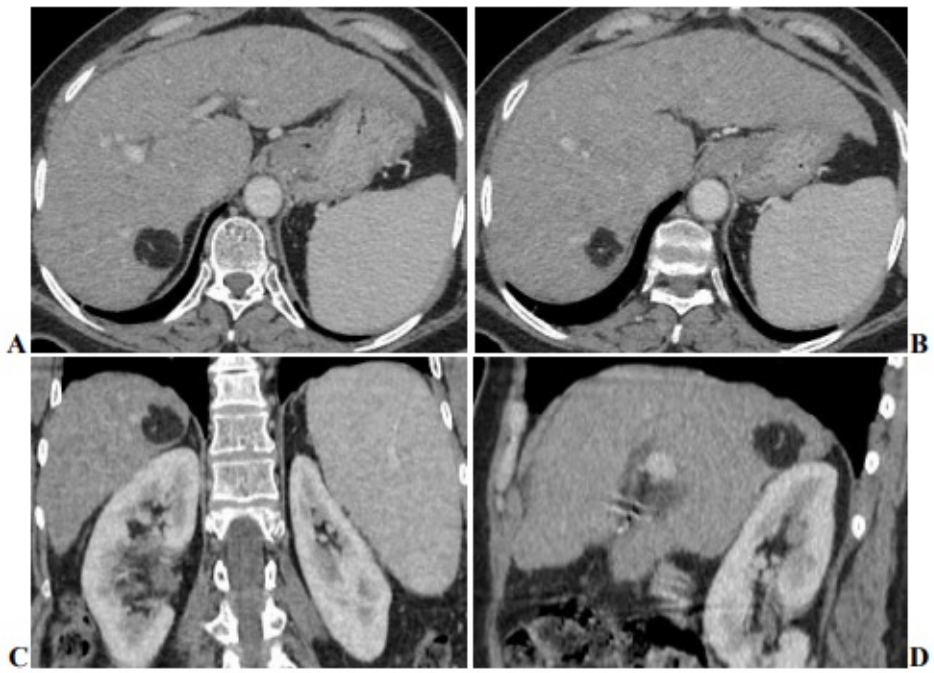
Diagnosis: Textiloma / Gossypiboma

Case 130

Clinical Presentation

A 69-year-old woman known case of chronic hepatitis C infection acquired from a blood transfusion because of a car accident. She had abdominal CT 4 months ago, which did not show any focal hepatic. Now the tumoural markers are positive.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images reveal a dysmorphic liver with hypertrophy of the caudate lobe, parenchymal heterogeneity and surface nodularity. Note a well- defined nodular lesion of fatty attenuation (density: -79 HU) with enhancing central vessels, located in the segment VII. Enlarged spleen with multiple varices seen in the epigastric region (not shown), indicating portal hypertension.

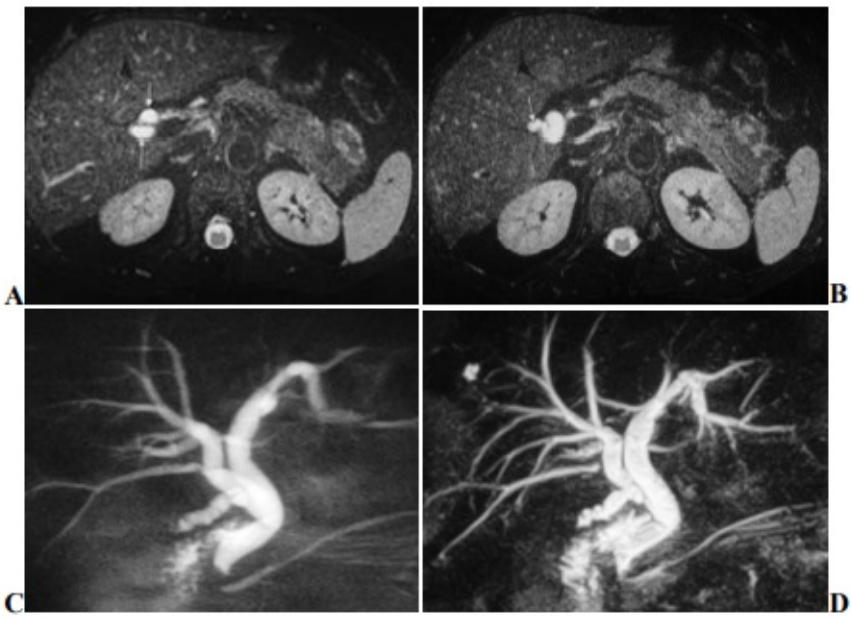
Diagnosis: Fatty Nodule of HCC in patient with Liver Cirrhosis and Portal Hypertension (Proved by Biopsy)

Case 131

Clinical Presentation

A 44-year-old woman had cholecystectomy 15 years ago, admitted 4 weeks ago for acute pancreatitis stage C, now on remission. MR scan was performed.

Radiological Findings



Abdominal MR scan, axial T2 (A, B) and 2D / 3D MRCP (C, D) images showing a low position of the upper biliary convergence well- visualised on axial T2 (arrows indicating right and left hepatic ducts) and 2D/3D MRCP images. The cystic stump is in ectopic position joining the right hepatic duct, well-visualised on axial T2 (arrow in B) and 2D/3D MRCP images. Note still swelling of the corporeocaudal region of the pancreas with oedematous infiltration of the peripancreatic fat.

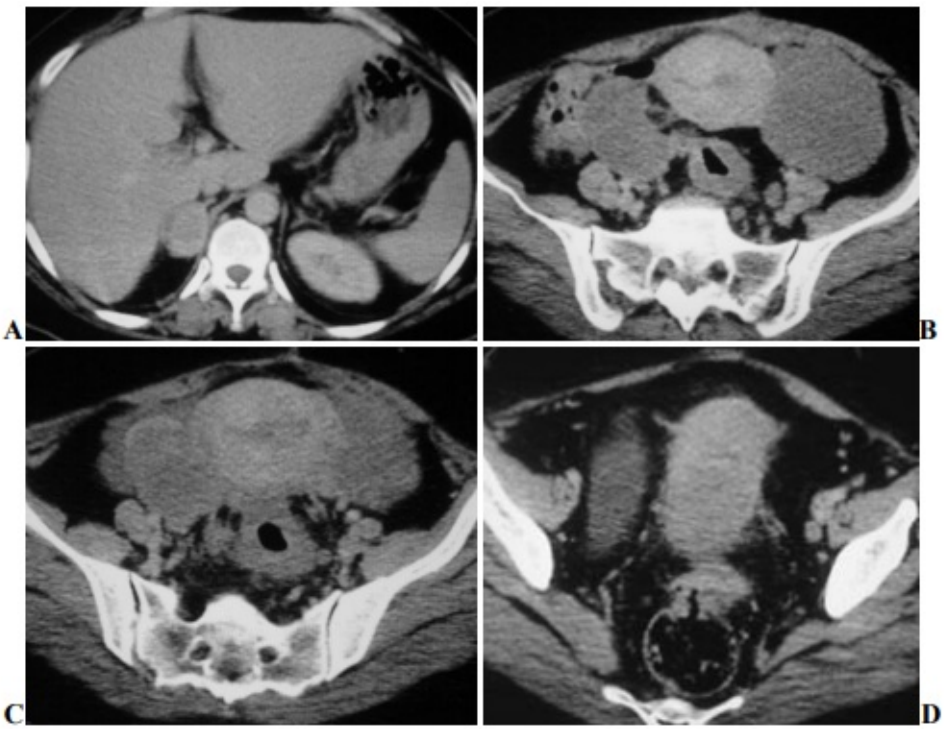
Diagnosis: Low Position of upper Biliary Convergence with Ectopic Cystic Duct

Case 132

Clinical Presentation

A 47-year-old female patient with history of per-rectal bleeding. Ultrasound examination was performed and showed pelvic masses.

Radiological Findings



Enhanced Abdominal CT scan images showing an irregular circumferential thickening of the rectosigmoid wall (carcinoma in this case) with bilateral solid hypodense ovarian masses corresponding to an ovarian metastasis (Krukenberg tumour). Note also an ovoid mass of the right adrenal gland (metastasis).

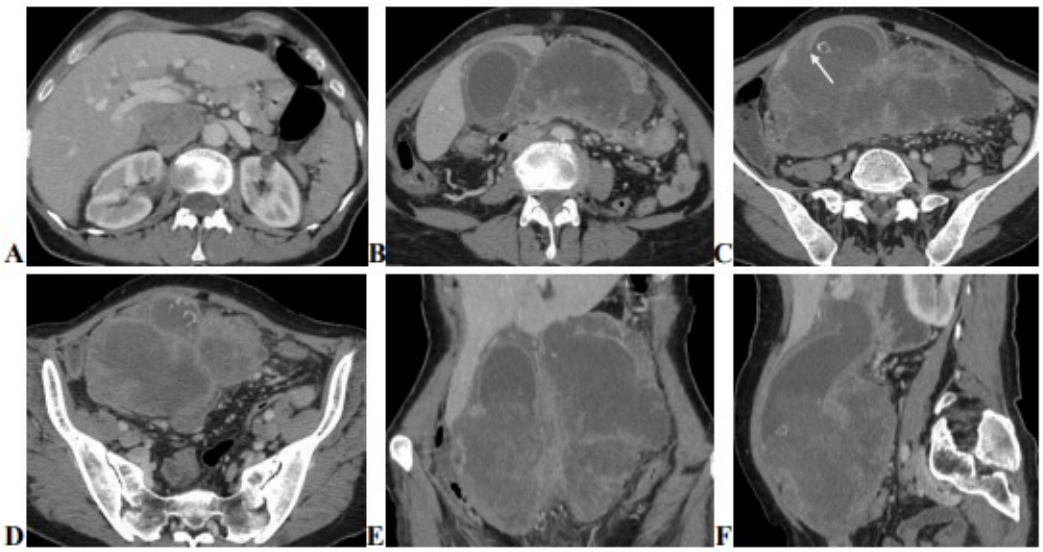
Diagnosis: Kruckenberg Tumour with Adrenal Metastasis (from Rectosigmoid Ca.)

Case 133

Clinical Presentation

A 58-year-old woman with history of neglected right upper abdominal pain with anorexia and weight loss. The physical exam revealed a huge mid-abdominal mass.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B, C, D) with coronal / sagittal reconstruction (E, F) images showing a large intraperitoneal necrotic soft tissue mass of heterogeneous enhancement, originating from the gallbladder well-visualised on the reformatted images with extension to segment IV of the liver (arrow in C). Note the gallbladder contains hyperdense calculi. Large periportal lymphadenopathy (image A). Nodular thickening of the peritoneal reflections, densification of the mesenteric fat with small nodules (peritoneal carcinomatosis).

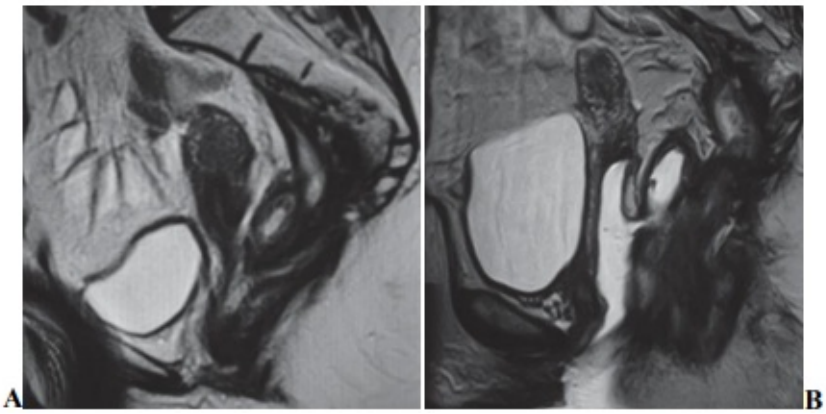
Diagnosis: Diffuse Infiltrative Carcinoma of Gallbladder

Case 134

Clinical Presentation

A 40-year-old woman had surgery 5 years ago for rectal adenocarcinoma complaining of passage of faeces per vaginum since 3 months.

Radiological Findings



MR scan, sagittal T2 before (A) and after (B) vaginal opacification. Before opacification (image A) the fistula is not visualised. After vaginal opacification with ultrasound gel, the fistulous tract is well-visualised extending from the posterior vaginal wall to the anterior rectal wall with passage of contrast through the fistula into the rectum.

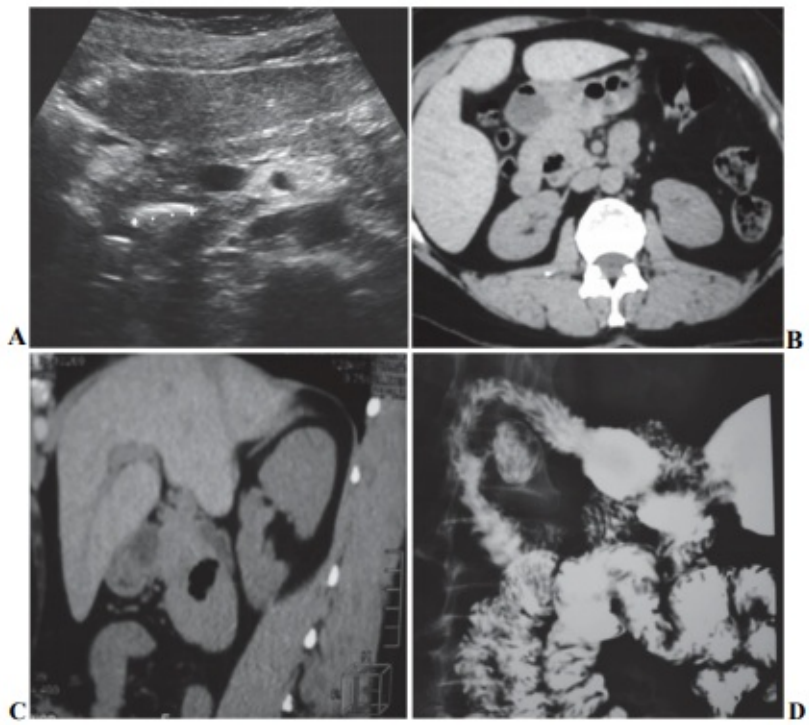
Diagnosis: Rectovaginal Fistula

Case 135

Clinical Presentation

A 56-year-old woman with past history of cholecystectomy 5 years ago presenting a right upper quadrant pain not responding to treatment.

Radiological Findings



Ultrasound examination transverse section at epigastric region (A), non-enhanced CT scan with sagittal reconstruction (B, C) and barium meal (D) images. The ultrasound section shows a bright linear echo independent from the CBD, posterior to the pancreatic head and medial to the 2nd duodenum. The CT images show a saccular outpouching from the 2nd duodenum containing gas. The barium meal confirms the presence of a diverticulum arising from the 2nd duodenum.

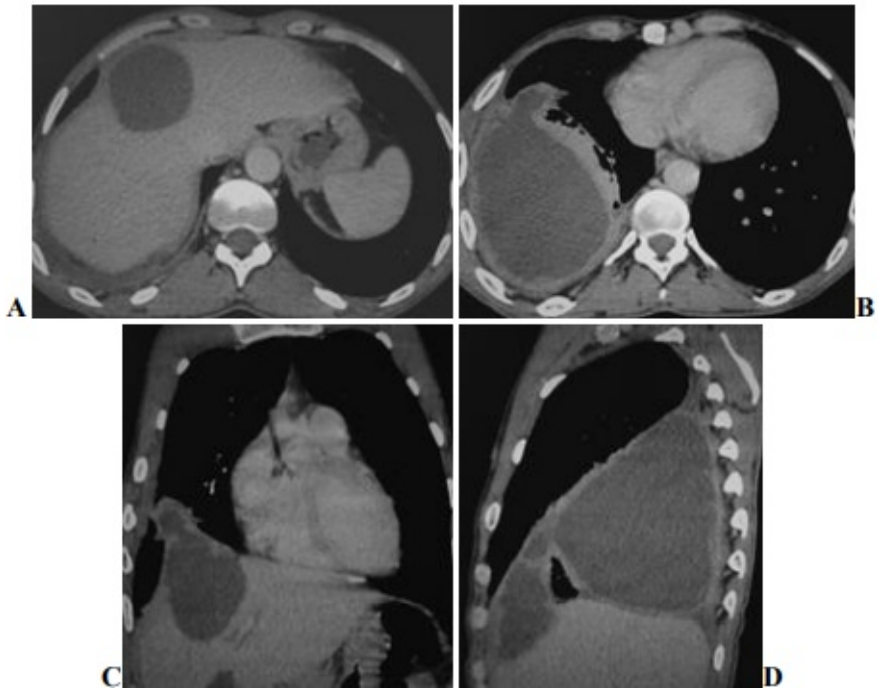
Diagnosis: Duodenal Diverticulum

Case 136

Clinical Presentation

A 30-year-old male patient shepherd treated for recurrent right pleural effusion. The patient presented with shortness of breath, dry cough and right-sided chest pain for 2 months. There was history of left intercostal drainage of chest 8 months back at the district hospital and the chest tube was removed after 7 days. There was no history of any chronic illness like diabetes mellitus, hypertension, asthma, contact with tuberculosis, blood transfusion, weight loss or illicit drug intake. On examination, he was afebrile, conscious, and oriented.

Radiological Findings



Enhanced CT scan, axial (A, B) images with coronal / sagittal reconstruction (C, D) showed a well-circumscribed superficial cystic mass of the right liver lobe (segment IVa) with trans-diaphragmatic rupture into the right pleural cavity which contains large fluid collection.

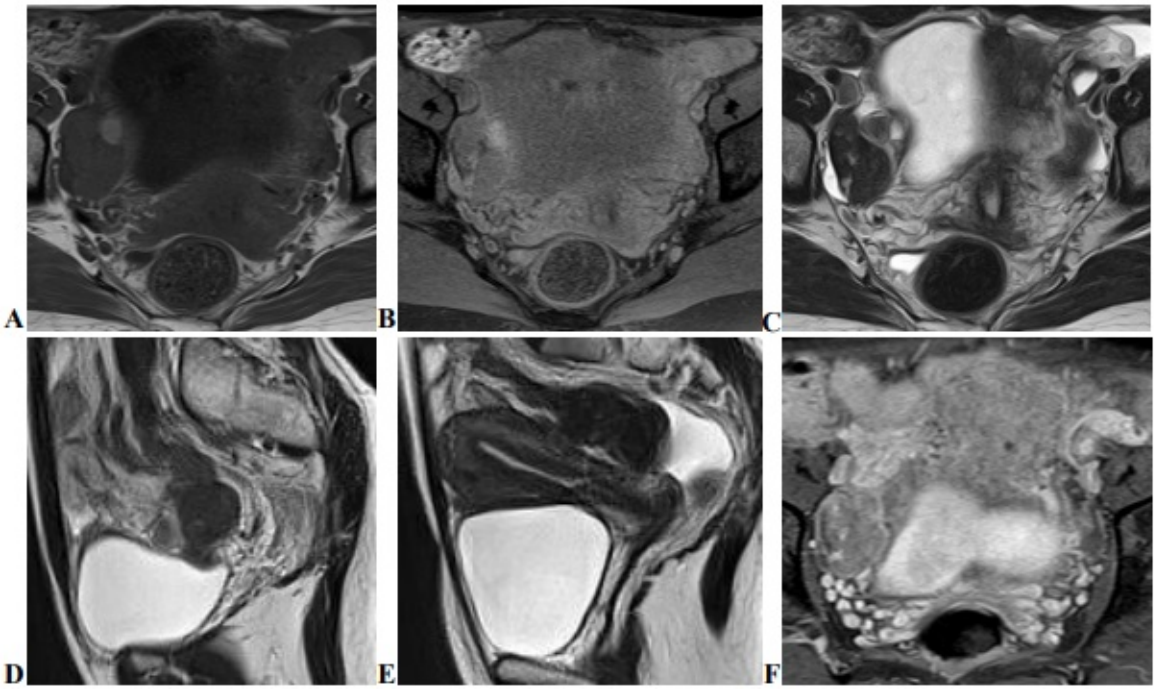
Diagnosis: Liver Hydatid Cyst Ruptured into the Pleural Cavity

Case 137

Clinical Presentation

A 42-year-old woman with history of surgery for uterine fibroid 10 years ago presented with history of intermittent right lower quadrant pain, irregular and heavy menses since last 8 months.

Radiological Findings



MR scan, axial T1 / T1 fat saturation (A, B), axial / sagittal T2 (C, D, E) and post-contrast axial T1 fat saturation (F) images showing a right ovarian mass of intermediate signal intensity on T1, low signal intensity on T2 with mild and heterogeneous enhancement after gadolinium administration. Note on the same ovary, there is a small oval lesion of high signal intensity on T1 and T1 fat saturation with no peripheral enhancement on post-contrast axial T1 fat saturation image. The left ovary is well- visualised and shows a small follicle. The uterus appears of normal size, shape and signal intensity. Note mild effusion in Douglas pouch.

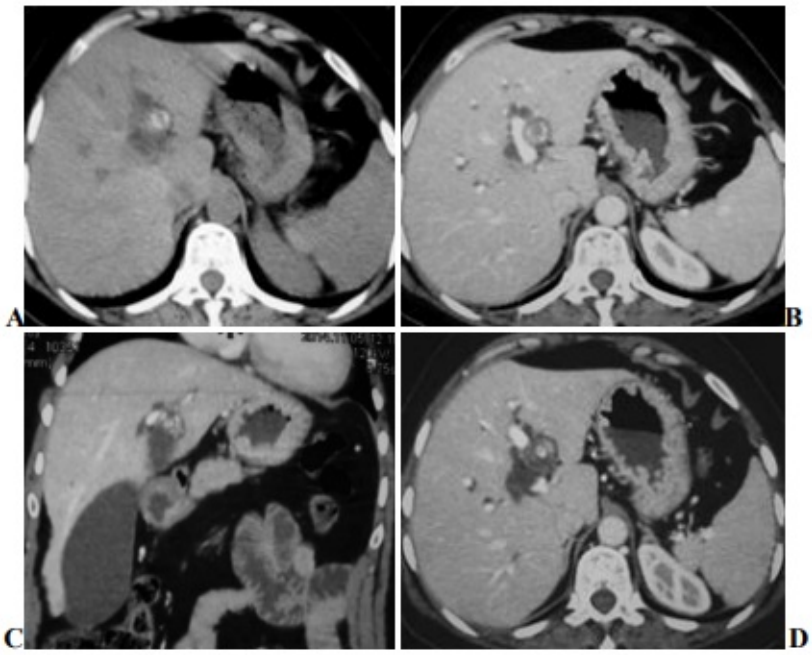
Diagnosis: Coexistence of Ovarian Fibroma and Endometrioma

Case 138

Clinical Presentation

A 48-year-old female patient presented with right upper abdominal pain predominantly in subcostal and epigastric regions with nausea, vomiting and no fever. She gave a history of excessively yellow-coloured urine and pale stools.

Radiological Findings



Pre-(A) and post-contrast (B, D) abdominal CT scan with coronal reconstruction (C) images showing a distended gallbladder containing a big stone (16 mm) impacted in its infundibulo-cystic region, compressing the upper biliary convergence with dilatation of the intrahepatic biliary ducts. The CBD was normal in size.

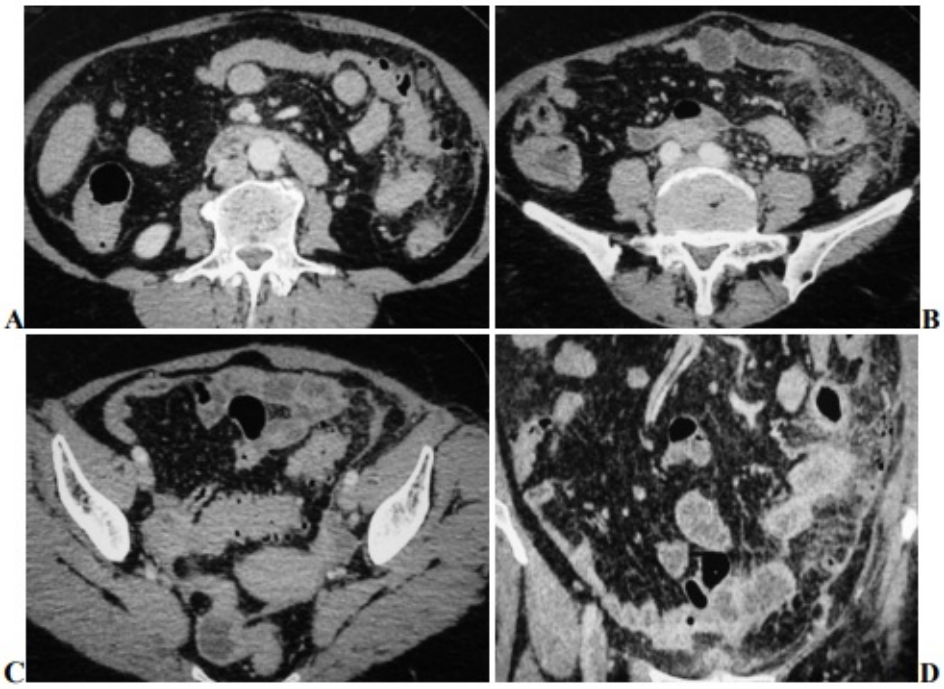
Diagnosis: Mirizzi Sydrome (Type I)

Case 139

Clinical Presentation

A 64-year-old female patient presented with unremitting pain in the left iliac fossa, nausea, vomiting and fever for 3 days. The patient had not previously undergone abdominal surgery and had no chronic diseases. Physical examination revealed local rebound tenderness over the left iliac fossa.

Radiological Findings



Enhanced abdominal CT scan (A, B, C) with coronal reconstruction (D) images show thickening with enhancement of sigmoid and left colonic wall, which contains many diverticula with pericolic stranding disproportionately prominent compared to the amount of bowel wall thickening. Note small rounded collection of fluid in the left iliac fossa adjacent to the sigmoid colon with thickened parietal peritoneum and extravasation of air into the pelvis and peritoneal cavity (images B, D).

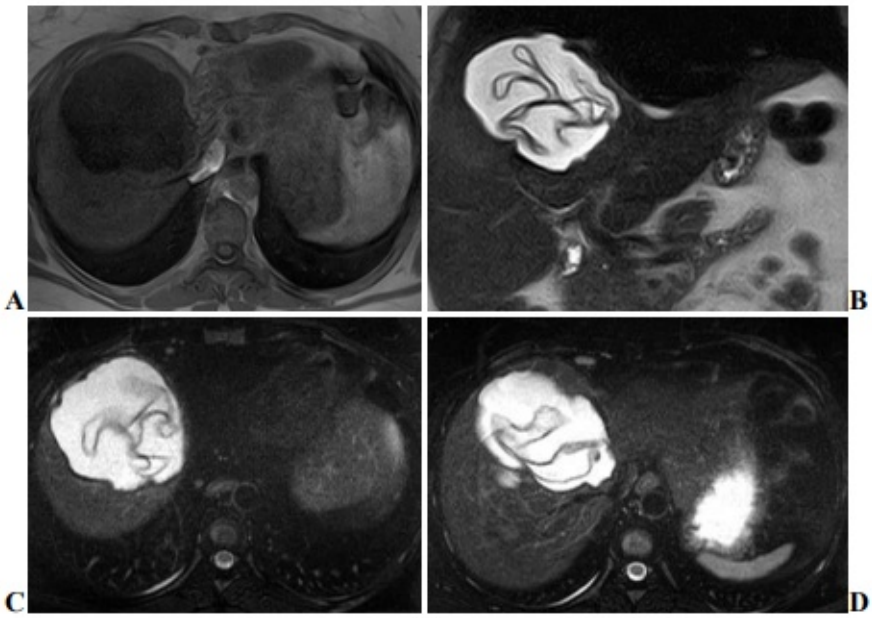
Diagnosis: Perforated Colo-sigmoid Diverticulitis with Abscess Formation

Case 140

Clinical Presentation

A 35-year-old woman presented with intermittent right upper abdominal pain for 1-year duration with on/off history of fever. She is a villager with history of keeping sheep and goats at home. The serological test including the hydatid immunoelectrophoresis, enzyme-linked immunosorbent assay (ELISA), latex agglutination and indirect haemagglutination (IHA) test were not performed during admission.

Radiological Findings



MR scan, axial T1 (A), coronal T2 FASE (B), axial T2 fat saturation (C, D) images showing a large cystic lesion centred on the segment VIII of the liver and appears of low signal intensity on T1, high signal intensity on T2 with "floating membrane sign" seen as low signal intensity curvilinear structure produced by detachment of the germinal membrane of the endocyst. Note the peripheral low signal intensity on T2, representing the pericyst.

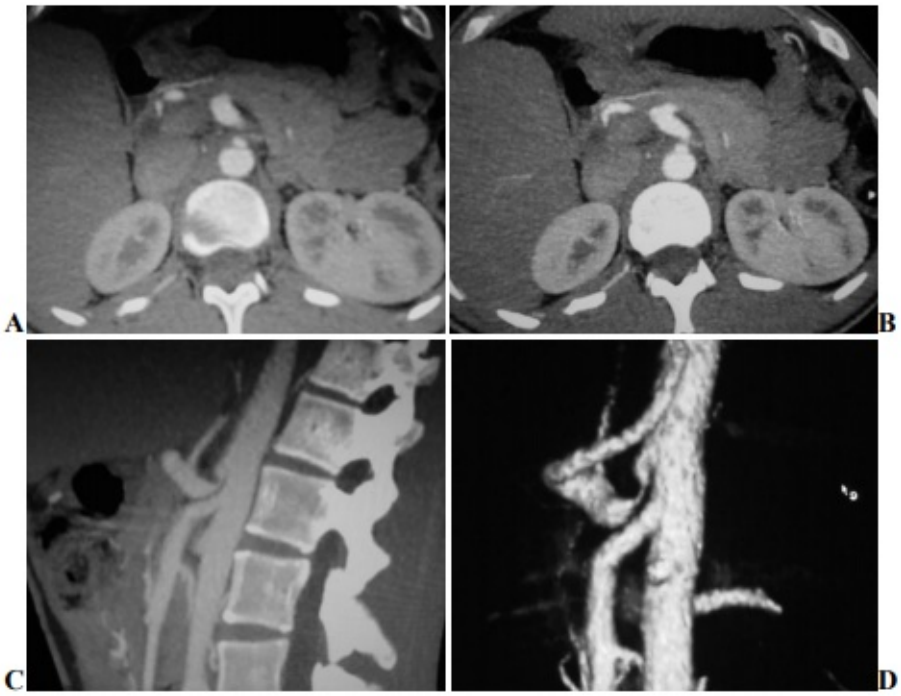
Diagnosis: Hydatid Cyst of Liver (Gharbi Type II or WHO CE3A)

Case 141

Clinical Presentation

A 27-year-old male patient with history of recurrent epigastric pain relieved in standing position and aggravated by supine position.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with sagittal / 3D reconstruction (C, D) images at the celiac trunk and SMA. The sagittal and 3D images demonstrate an acute angulation and narrowing of the proximal celiac axis by an indentation of the median arcuate ligament which crosses at this level. There is moderate post-stenotic dilatation, which creates a “hooked” appearance that is characteristic of median arcuate ligament syndrome.

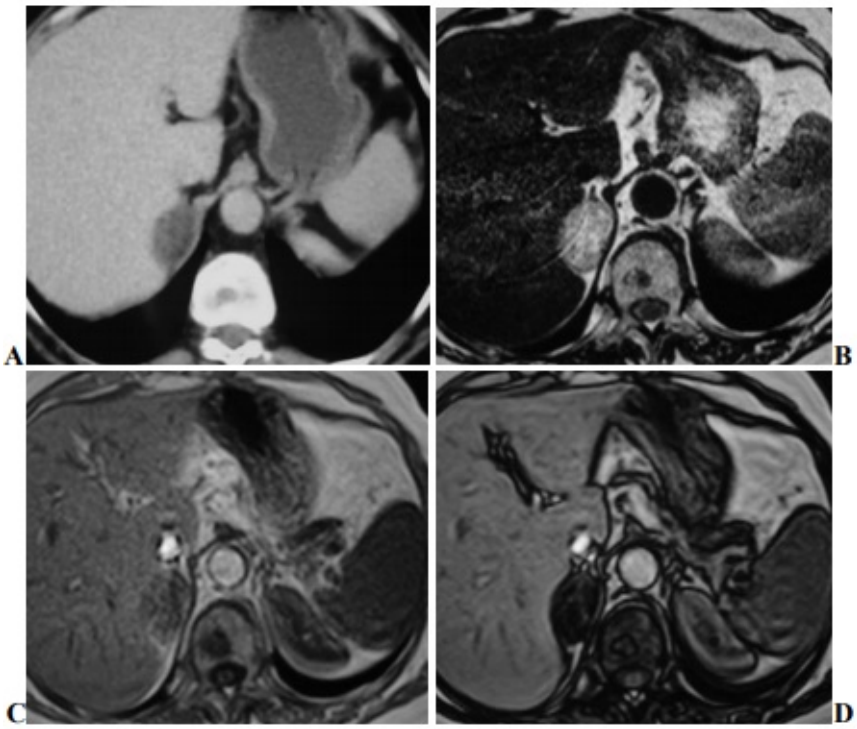
Diagnosis: Median Arcuate Ligament Syndrome

Case 142

Clinical Presentation

A 55-year-old female patient with incidental right adrenal mass seen on ultrasound examination done for abdominal pain.

Radiological Findings



Non-enhanced abdominal CT scan (A) and MR scan, axial T2 (B), T1 GE In-phase (C) and Out-of-phase (D) images. The CT shows a well- defined nodular mass in the right adrenal gland, which has an attenuation of - 4 HU. On MR images this soft tissue mass appears of high signal intensity on T2, with signal drop on T1 out of phase relative to that of the spleen, indicating the presence of intracellular fat.

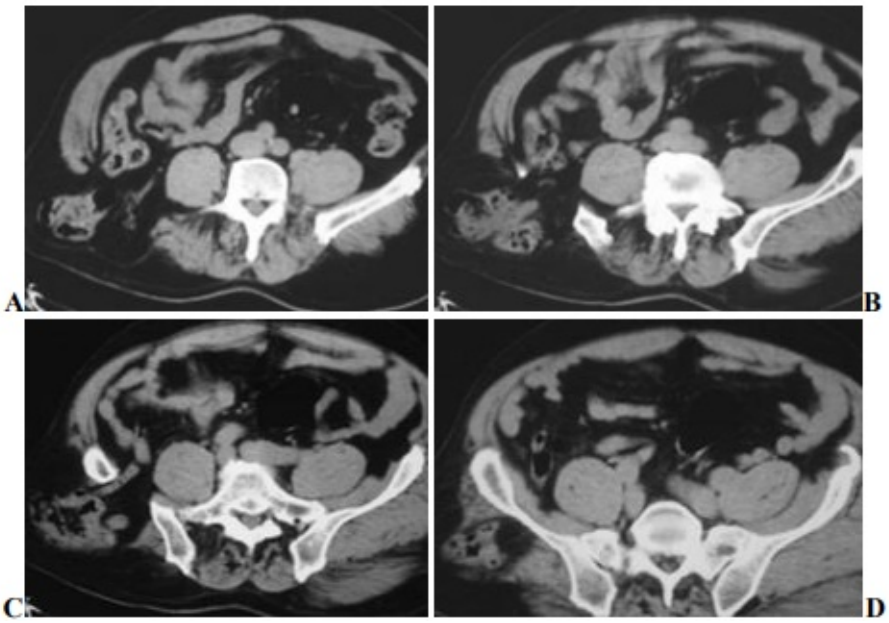
Diagnosis: Adrenal Adenoma

Case 143

Clinical Presentation

A 72-year-old male patient with past history of surgery of the right iliac bone presented with right lumbar mass.

Radiological Findings



Non-enhanced Abdominal CT scan images reveal a bony defect of the right iliac bone, through it passes the ascending colon, filling the external lumbar fossa. The rest of the CT scan examination was normal.

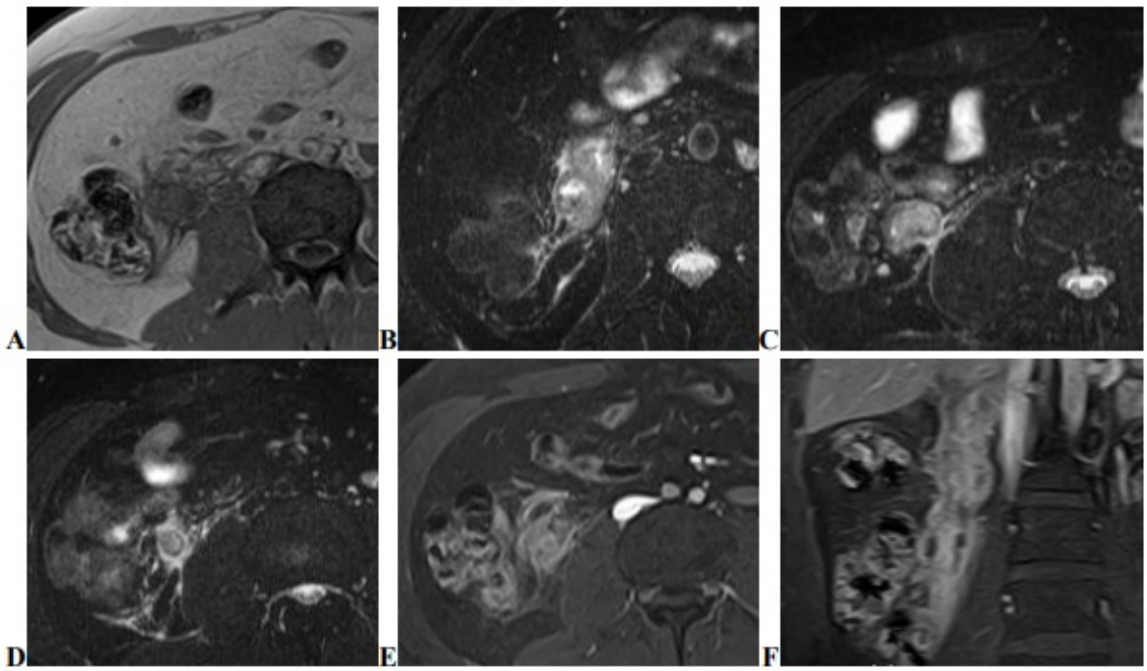
Diagnosis: Hernia Through the Iliac Crest Bone Graft Harvest Site

Case 144

Clinical Presentation

A 35-year-old man with 5 days' history of epigastric pain and fever. The pancreatic enzymes were normal, WBC=15000/mm3.

Radiological Findings



Abdominal MR scan, axial T1 (A), axial T2 fat saturation (B, C, D) and axial / coronal post-contrast T1 fat saturation (E, F) images showing a dilated appendix (12 mm) with thickened and enhanced wall. The appendix has an ascending course up to the sub-duodenal region where there is a small collection (about 15 mm) with reactional thickening of the duodenal wall, surrounding fat stranding, and thickened enhanced Gerota's fascia.

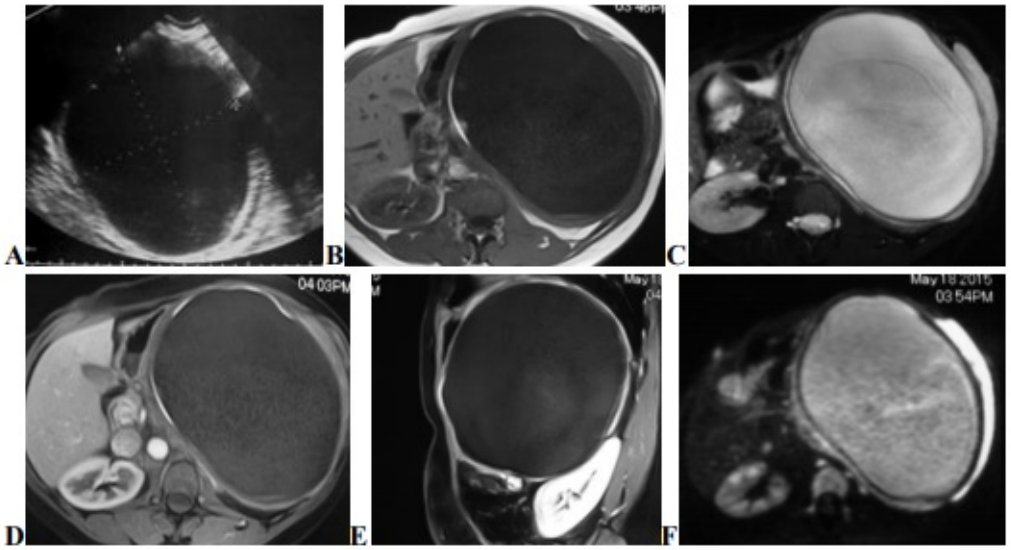
Diagnosis: Perforated Acute Appendicitis with Sub-duodenal Abscess

Case 145

Clinical Presentation

A 32-year-old male patient presented with swelling of the left upper quadrant. An ultrasound and MR scan were performed.

Radiological Findings



Ultrasound of the left hypochondrium, longitudinal section (A) and MR scan axial T1 (B), T2 fat-sat (C), post-contrast axial / sagittal T1 fat-sat (D, E) and DWI b400 (F) images. The ultrasound shows a huge well-defined cystic lesion of spleen. On MR images this cystic lesion appears relatively homogeneous of low signal intensity on T1, high signal intensity on T2 with characteristic hypointense peripheral rim on T2 and DWI images (C, F). Note the marked enhancement of the surrounding splenic parenchyma with no obvious enhancement of the pericyst.

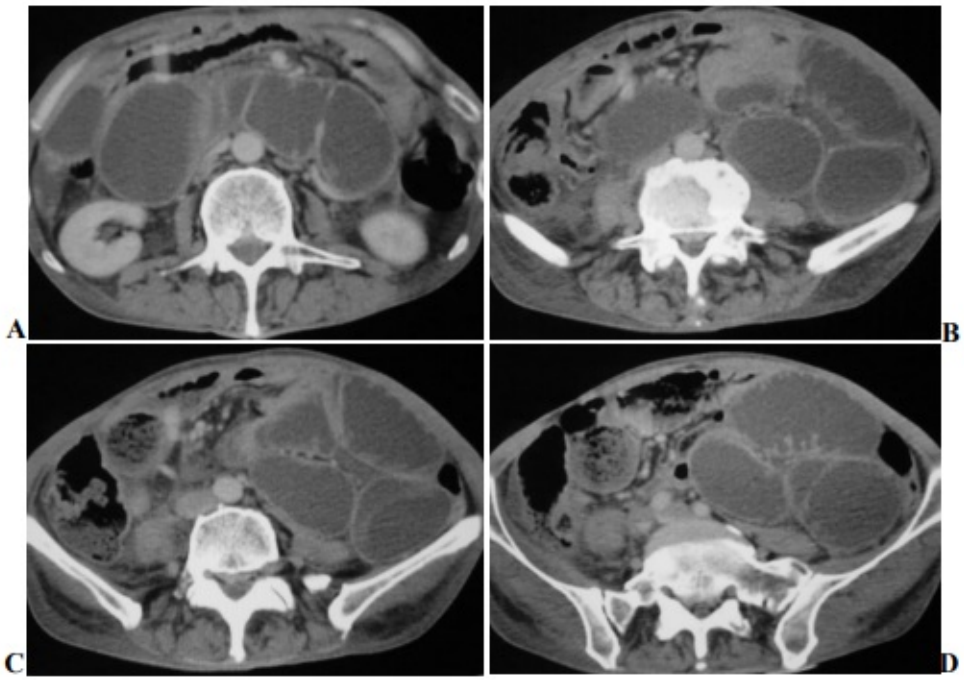
Diagnosis: Splenic Hydatid Cyst

Case 146

Clinical Presentation

A 64-year-old male patient had partial gastrectomy with chemotherapy a few years ago for gastric carcinoma, presenting since few days severe abdominal pain with distension, vomiting and no gas emission.

Radiological Findings



Enhanced abdominal CT scan images revealed a distended duodenum and small bowel loops (> 2.5 cm) containing fluid with bright enhancement of viable bowel wall. Note the presence of a faeces sign in the right iliac fossa with an adjacent transition point (the point of obstruction) and decompressed small bowel distal to the point of obstruction.

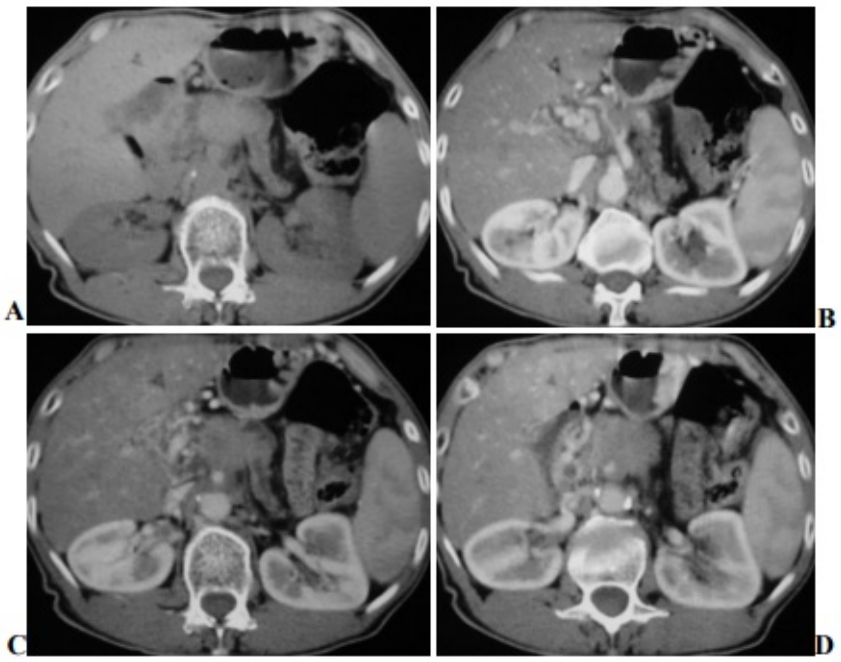
Diagnosis: Adhesive small bowel Obstruction

Case 147

Clinical Presentation

A 66-year-old female patient with history of upper abdominal pain radiating to the back, nausea and vomiting, loss of appetite and weight loss.

Radiological Findings



Abdominal CT scan, pre-(A), and post-contrast (B, C, D) images demonstrate an enhanced mass lesion of the pancreatic body with irregular contours, encircling the celiac trunk and its branches as well as the SMA with reduced calibre of their lumen. The pancreatic duct is dilated with atrophied pancreatic tail.

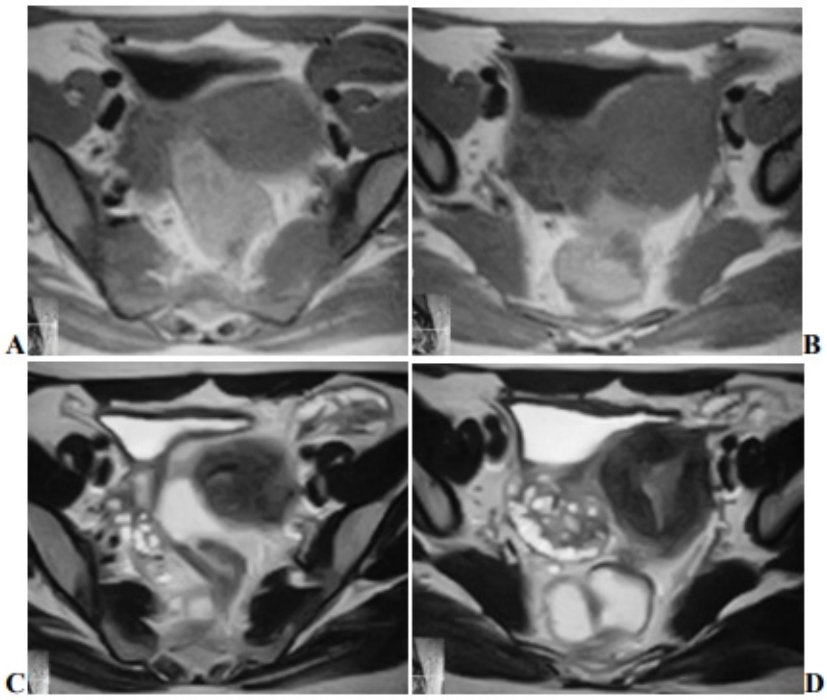
Diagnosis: Pancreatic Carcinoma (Stage III / T4N0M0)

Case 148

Clinical Presentation

A 28-year-old female patient with history of cyclic pelvic pain and metrorrhagia.

Radiological Findings



MR scan, non-enhanced axial T1 (A, B) and T2 (C, D) weighted images showing enlarged both ovaries, containing multiple small follicles of central and peripheral subcortical distribution. The uterus is of normal size and signal intensity.

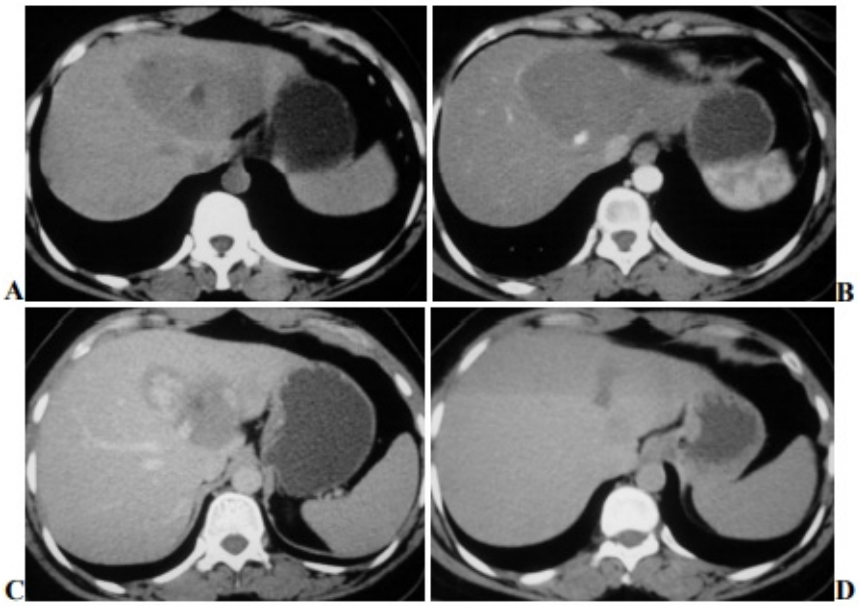
Diagnosis: Bilateral Microcystic Ovarian Dystrophy

Case 149

Clinical Presentation

A 36-year-old woman with history of abdominal discomfort. The abdominal ultrasound showed an echogenic liver mass.

Radiological Findings



Abdominal CT scan, pre-(A) and post-contrast (arterial phase = B, portal phase = C and delayed phase = D) images revealed a spherical hypodense mass in the segment IVa of the liver with nodular discontinuous peripheral enhancement that is nearly isodense to blood vessels on arterial phase, persisted and progressed centripetal enhancement on portal phase with complete “fill-in” on delayed phase except the central fibrosed scar.

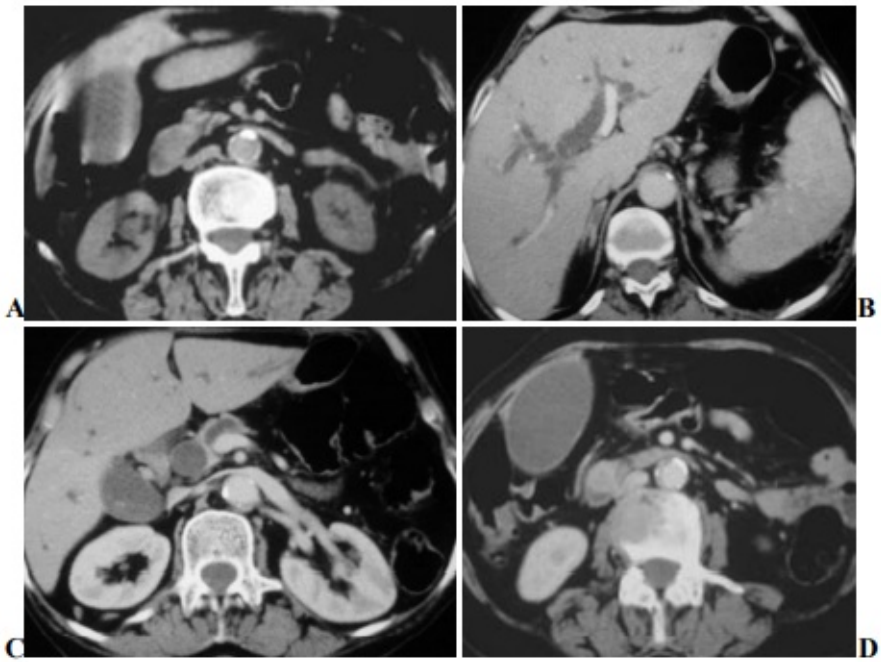
Diagnosis: Hepatic Cavernous Haemangioma

Case 150

Clinical Presentation

A 74-year-old woman with history of obstructive jaundice, back pain and weight loss.

Radiological Findings



Pre-(A) and post-contrast (B, C, D) CT scan images showing a small enhancing soft tissue mass involving the ampulla of Vater with distended gallbladder, dilated CBD and pancreatic duct “double duct” sign. The rest of CT examination was unremarkable.

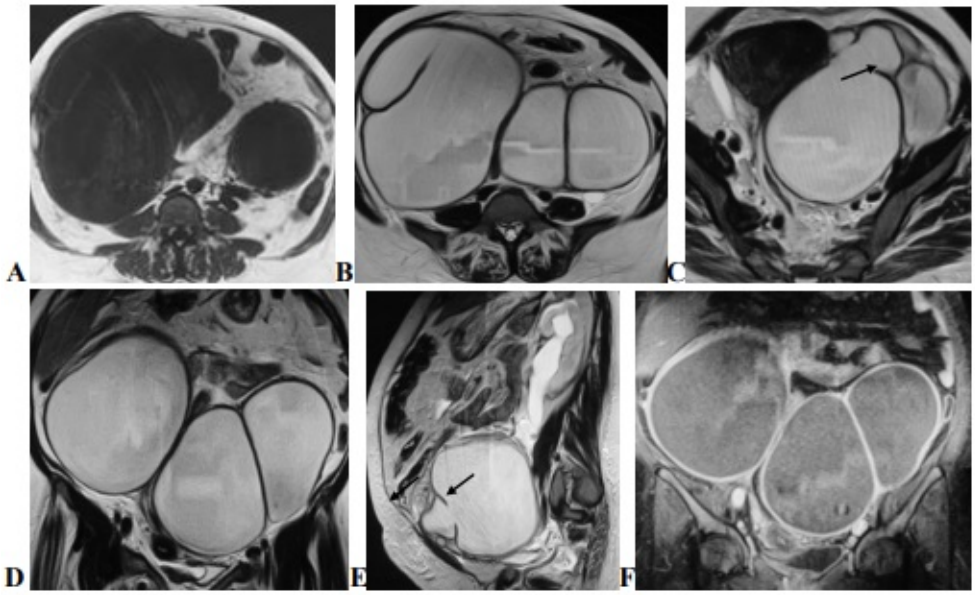
Diagnosis: Ampullary Carcinoma (in this Case)

Case 151

Clinical Presentation

A 46-year-old woman with history of secondary infertility of 10 years presented with pelvic pain and progressive lower abdominal distension of 6 months' duration.

Radiological Findings



MR scan, axial T1 (A), axial / coronal / sagittal T2 (B, C, D, E) and post-contrast coronal T1 fat saturation (F) images reveal large bilateral and tortuous tubular structure of low signal intensity on T1, high signal intensity on T2 with enhanced wall after gadolinium administration, suggestive of dilated fallopian tubes. Note the incompletely effaced mucosal and submucosal plicae along the tubal wall (black arrow images C, E), findings that help to differentiate hydrosalpinx from an ovarian cystadenoma. Left ureterohydronephrosis by compression of the lower ureter with mild peritoneal effusion. The uterus is well-visualised on image C and appears normal.

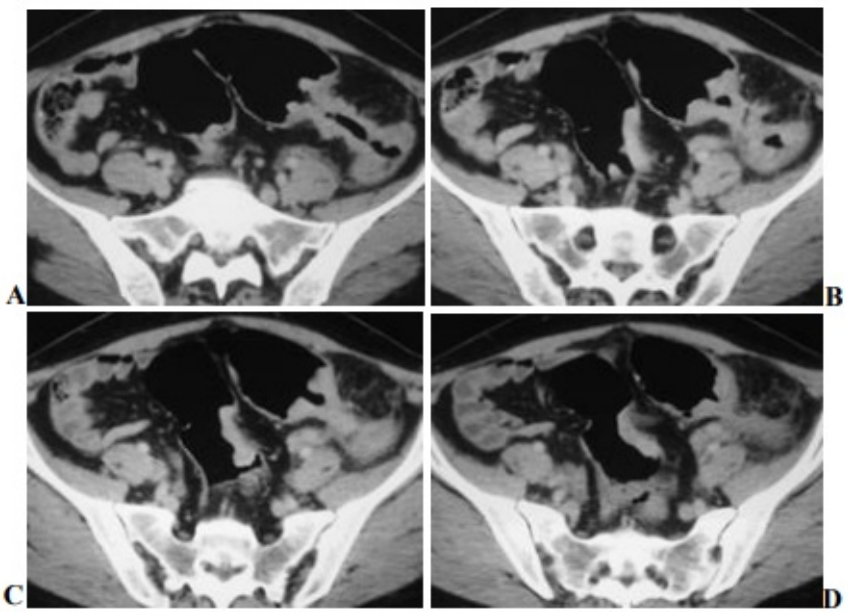
Diagnosis: Bilateral Hydrosalpinx

Case 152

Clinical Presentation

A 37-year-old female patient with history of per-rectal bleeding and pelvic pain.

Radiological Findings



Contrast enhanced abdominal CT scan images showing a double tumoural process: the first lesion is seen as a circumferential irregular mural thickening of the sigmoid colon with narrowing of the sigmoid lumen and strands of soft tissue extending from serosal surface into perisigmoid fat indicating infiltration; the second lesion is seen as a localised irregular mural thickening of the upper rectum with infiltration of the adjacent perirectal fat. No perisigmoid or perirectal enlarged lymph nodes.

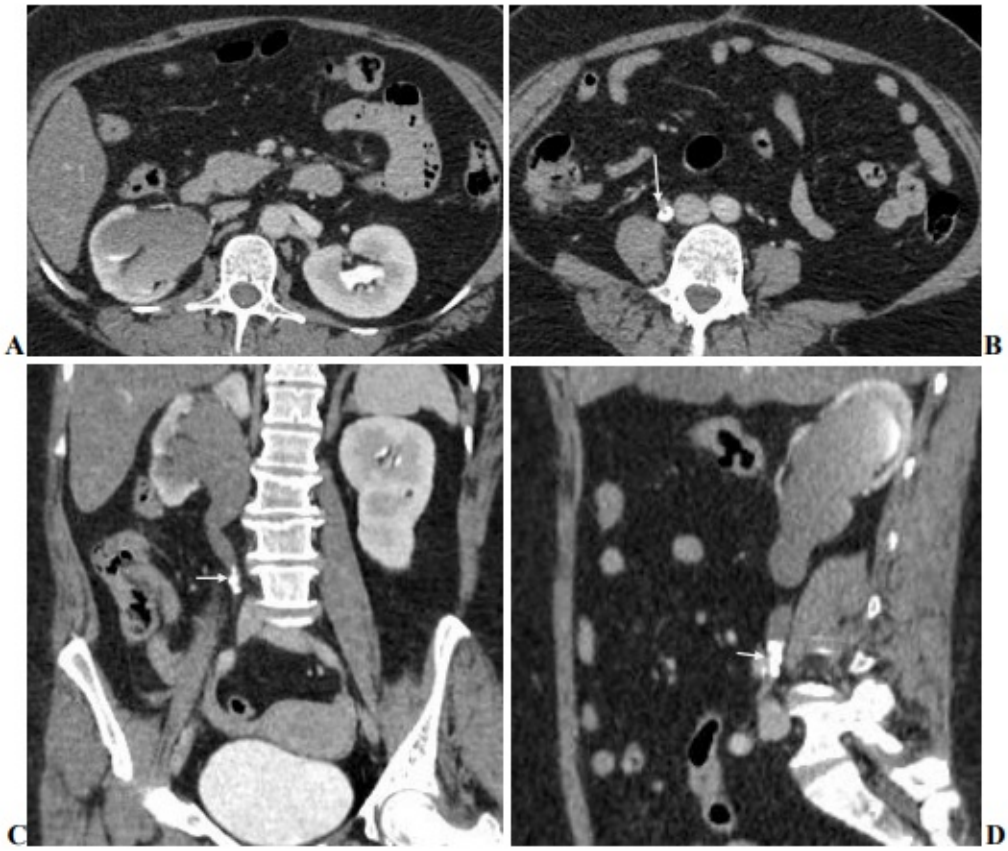
Diagnosis: Sigmoid and Rectal Carcinoma (Stage B: T3N0M0 in this case)

Case 153

Clinical Presentation

A 57-year-old female with history of neglected urinary infection presented to the emergency department with acute right flank pain. An abdominal ultrasound was performed and revealed a right uretrohydronephrosis with no evidence of ureteric stone according to the resident on call.

Radiological Findings



CT urography, axial (A, B) with coronal / sagittal reformatted (C, D) images revealed a right ureterohydronephrosis with delayed secretion as compared to the normal left kidney and presence of a big ureteric stone (16 mm/density =1100 HU in this case) obstructing its lumbar segment at the level of L4 vertebra (arrow in B, C, D). Note reduced size of the right kidney with thinning of the cortical renal parenchyma, indicating the long standing ureteric obstruction. The left kidney and urinary bladder were normal.

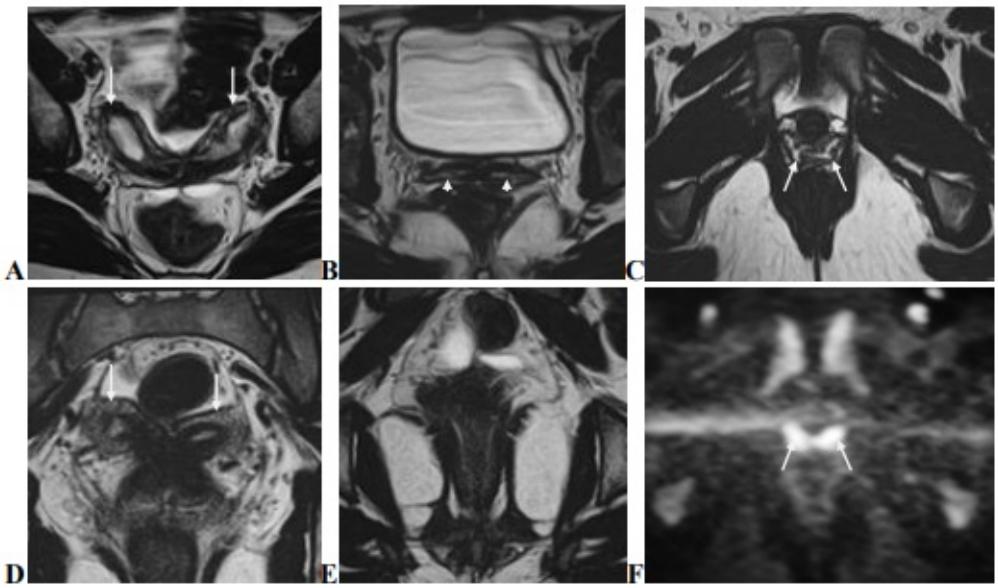
Diagnosis: Obstructing Ureteric Stone with Ureterohydronephrosis

Case 154

Clinical Presentation

A 15-year-old girl with history of an unusual pressure and cramping pain before and during her menstrual period.

Radiological Findings



Pelvic MR scan, axial T1 (A), axial / coronal T2 (B, C, D, E) and DWI (F) images show two widely divergent uterine horns (arrows, images A and D) separated by a deep fundal cleft greater than 1 cm in this case (image D). Two separate cervices are present (arrowheads, image B), images (C, F) caudal to image (B) show two vaginas (arrows) separated with longitudinal septum. No transverse vaginal septum or haematometrocolpos seen (absence of vaginal obstruction). Both kidneys (not shown) were in normal position.

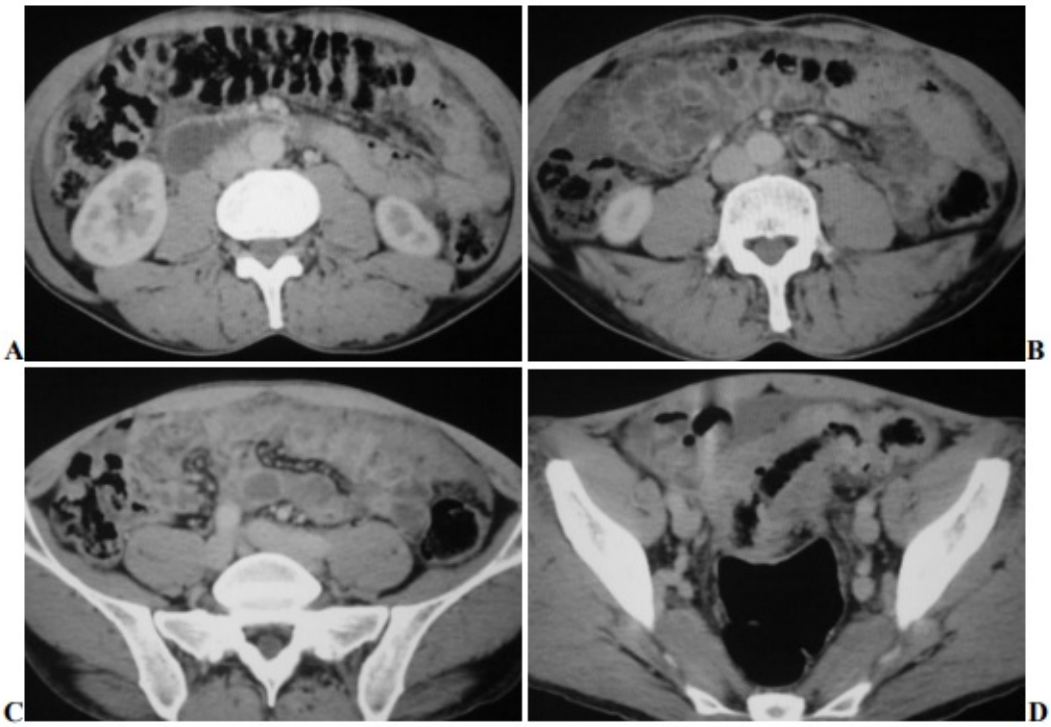
Diagnosis: Uterus Didelphys (Class III of American Fertility Society classification)

Case 155

Clinical Presentation

A 49-year-old male patient with history of weight loss and per-rectal bleeding.

Radiological Findings



Enhanced Abdominal CT scan images reveal an irregular circumferential thickening of the sigmoid colon with long stricture (11 cm in this case), mild intraperitoneal effusion and omental thickening. The rest of the CT scan examination was normal.

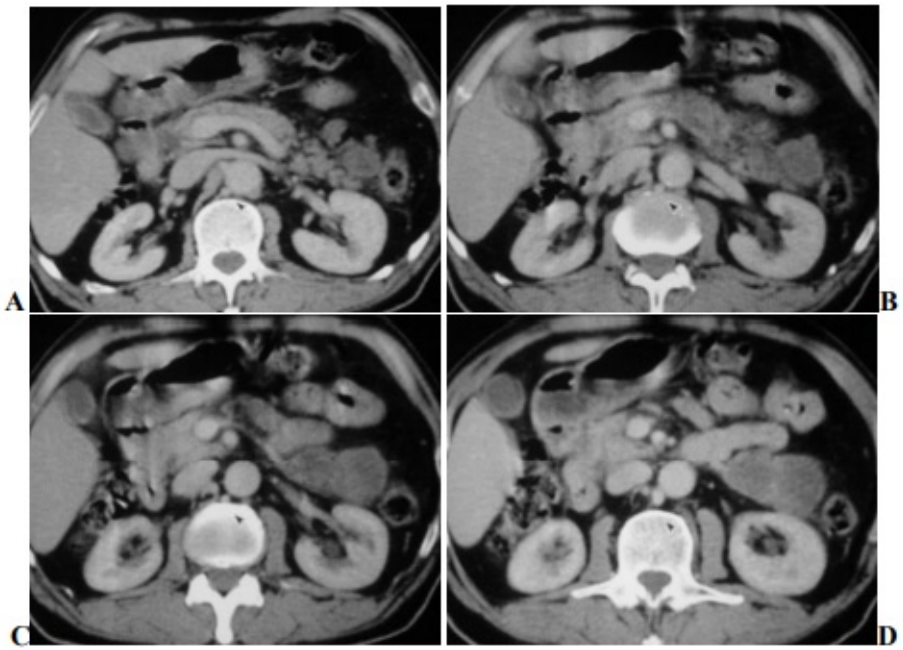
Diagnosis: Carcinoma of Sigmoid Colon with Peritoneal Carcinomatosis

Case 156

Clinical Presentation

A 79-year-old male patient had acute pancreatitis 2 months ago. Now complaining of left upper quadrant pain.

Radiological Findings



Enhanced Abdominal CT scan images showing a lobulated cystic lesion, adjacent to the tail of pancreas, filling the left anterior pararenal space with thick enhancing wall. The pancreas shows normal size and density. The rest of the CT scan examination was unremarkable.

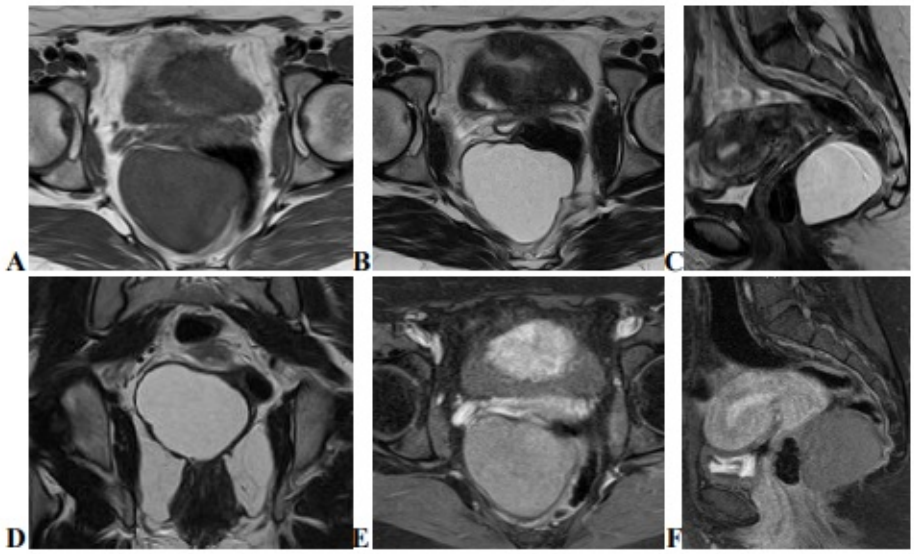
Diagnosis: Pancreatic Pseudo-cyst

Case 157

Clinical Presentation

A 39-year-old woman with medical history of pelvic surgery. She had cystectomy and adhesiolysis due to previous tuberculosis presented with lower abdominal pain with episodes of constipation. Tumour markers such as CEA, AFP, CA125 and CA19-9 were normal.

Radiological Findings



Pelvic MR scan, axial T1 (A), axial / sagittal / coronal T2 (B, C, D) and post-contrast axial / sagittal T1 fat saturation (E, F) images reveal a well- defined subperitoneal cystic formation with downward extension of low signal intensity on T1, high signal intensity on T2 with no peripheral enhancement after gadolinium administration. The rectum is displaced to the left.

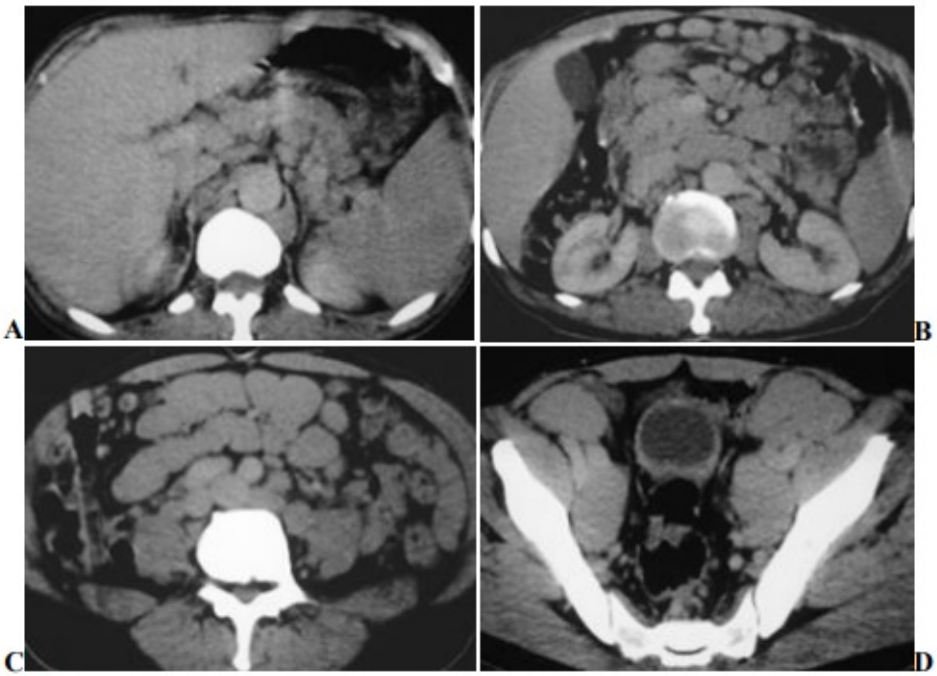
Diagnosis: Peritoneal Inclusion Cyst

Case 158

Clinical Presentation

A 71-year-old male patient with history of abdominal pain, unexplained fever and impaired general health with weight loss. The abdominal examination found painful masses in mid abdomen and pelvi-inguinal regions which were difficult to delineate without any hepatomegaly or splenomegaly.

Radiological Findings



Enhanced Abdominal CT scan images showing multiples abdominopelvic lymphadenopathy seen in the periportal, coeliomesenteric, intramesenteric, para-aortic and pelvi-inguinal regions, as well as in the posterior infra-mediastinal space. The liver and spleen were normal in size and density. No other abnormality seen.

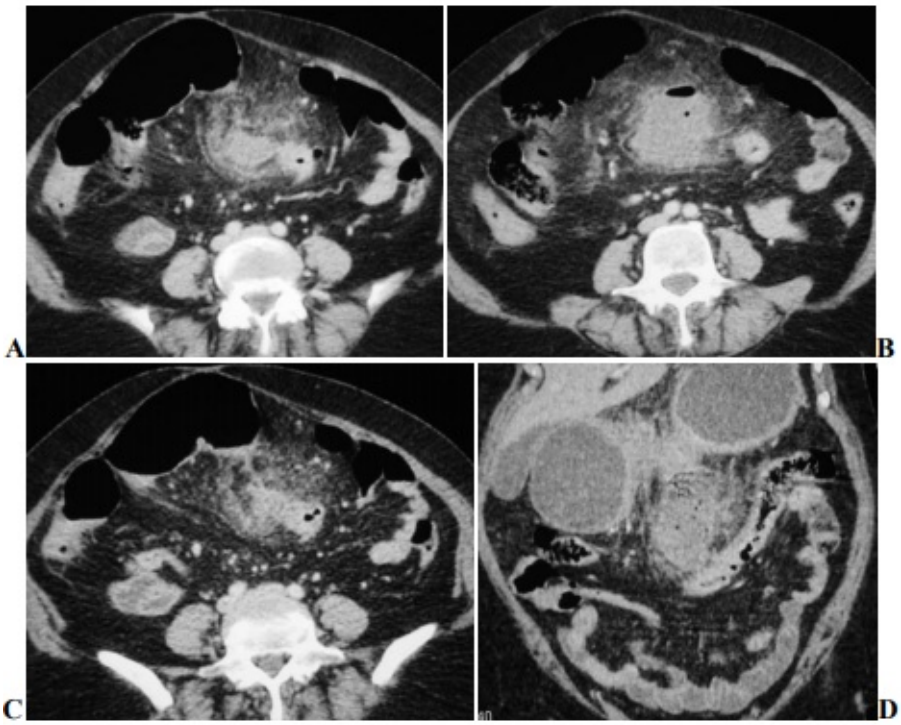
Diagnosis: Non-Hodgkin Lymphoma (NHL)

Case 159

Clinical Presentation

A 64-year-old woman who complained of fever with unremitting periumbilical pain increasing over past few days. On physical examination, a mass was palpable under the umbilicus, which was mobile and very tender. WBC count was elevated.

Radiological Findings



Enhanced abdominal CT scan (A, B, C) images with coronal reconstruction (D) demonstrate a relatively regular circumferential thickening of the left paramedian transverse colon, containing small diverticula with large collection of the gastrocolic ligament containing an air-fluid level associated with densification of the pericolic fat.

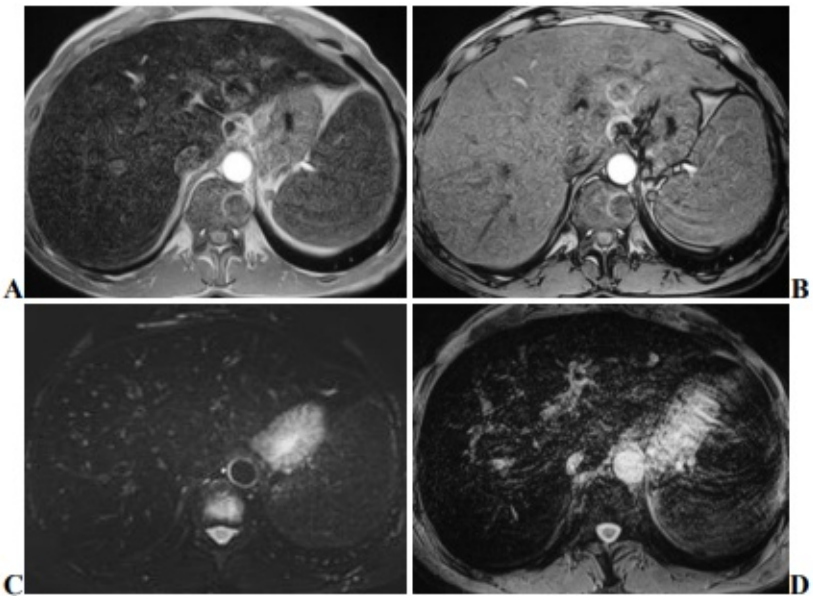
Diagnosis: Perforated Diverticulitis with Abscess in Gastrocolic Ligament

Case 160

Clinical Presentation

A 42-year-old man presented with arthralgia, profound sense of fatigue and erectile dysfunction. There was no family history of unexplained liver disease. On physical examination, the liver and spleen were palpable. Laboratory data revealed Hb of 12 g/dL (12.0–16.0), serum ferritin was 1,274 ng/mL (10–162 ng/mL), serum iron was 73 µg/dL (25– 156). WBC, platelets, liver transaminases and alkaline phosphatase levels were normal.

Radiological Findings



Abdominal MR scan, axial T1 GE in-phase (A) out-phase (B), axial T2 fat saturation (C) and T2 GE (D) images. Both liver and spleen were increased in size (liver 18 cm at mid-clavicular line and spleen 16 cm of greater axis). Gradient in-phase and out-of-phase sequences are particularly useful in this case, demonstrating changes that are the opposite of those seen in hepatic steatosis. In hemochromatosis, the liver on in-phase sequence (which is usually obtained second, and thus more susceptible to T2* effects) demonstrates low signal, whereas the out-of-phase sequence demonstrates higher signal. Note also the signal loss of liver and spleen on T2 and T2* GE. The pancreas was spared. No fibrosis of the liver. No involvement of the bone marrow.

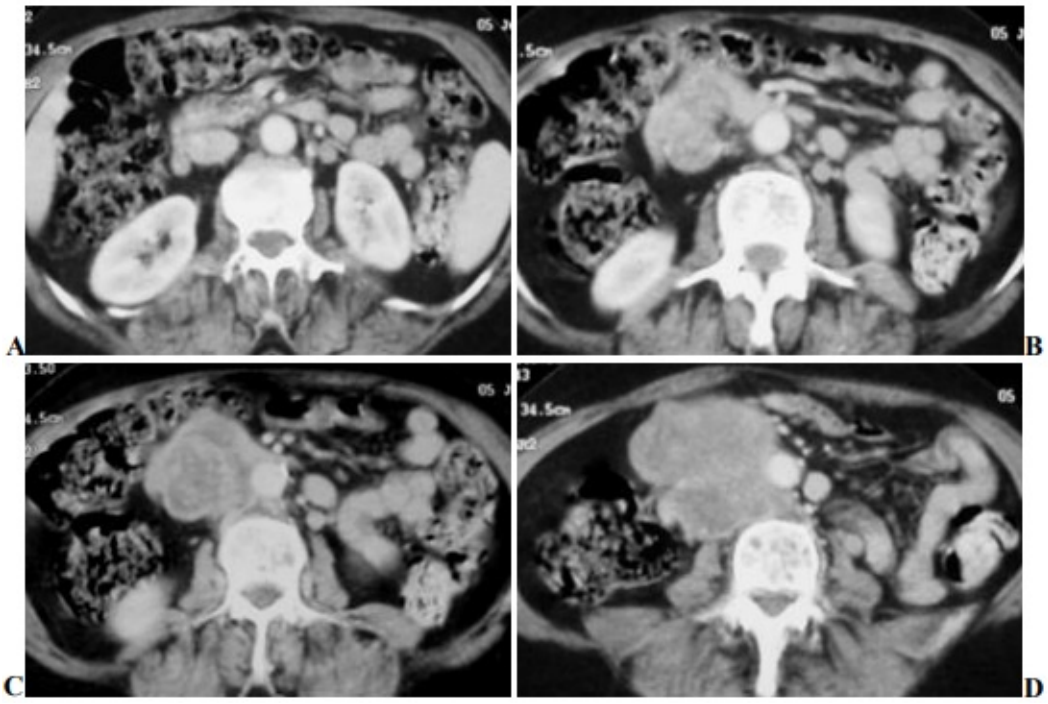
Diagnosis: Secondary Hemochromatosis

Case 161

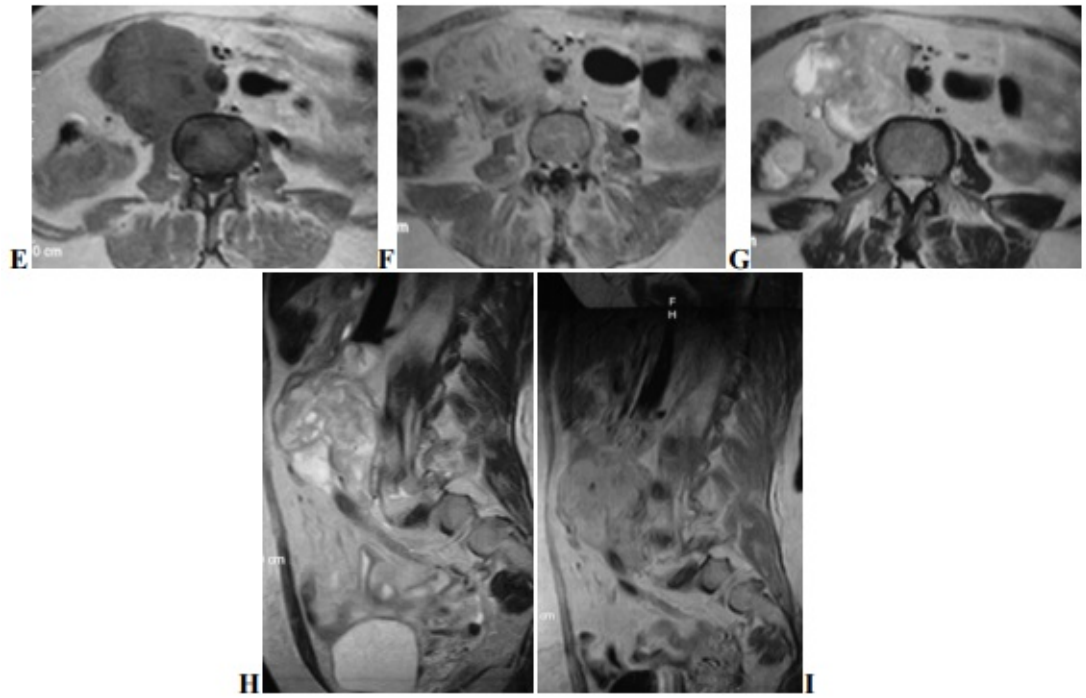
Clinical Presentation

A 66-year-old hypertensive complaining of moderate abdominal pain, gastric plenitude, abdominal distension and bulging of the upper part of the abdomen. At physical examination, a palpable round, hard and painful mass was noted in the right paramedian region of the abdomen. No lower limbs oedema was seen.

Radiological Findings



Enhanced Abdominal CT scan (A, B, C, D) images demonstrating the presence of a heterogeneously enhanced, large slightly lobulated retroperitoneal mass in close contact with the IVC with an intraluminal component. Note the extension to the inter-aorta-caval and retro- aortic spaces.



Continued same patient, MR scan, axial T1 (E), axial / sagittal T2 (G, H) and axial / sagittal T1-post-contrast (F, I) images. The previously described mass is centred on the infra-renal segment of the IVC and appears of intermediate signal intensity on T1, heterogeneous high signal intensity on T2 with heterogeneous enhancement after gadolinium administration. The sagittal images (H, I) show more clearly the intraluminal component in the IVC.

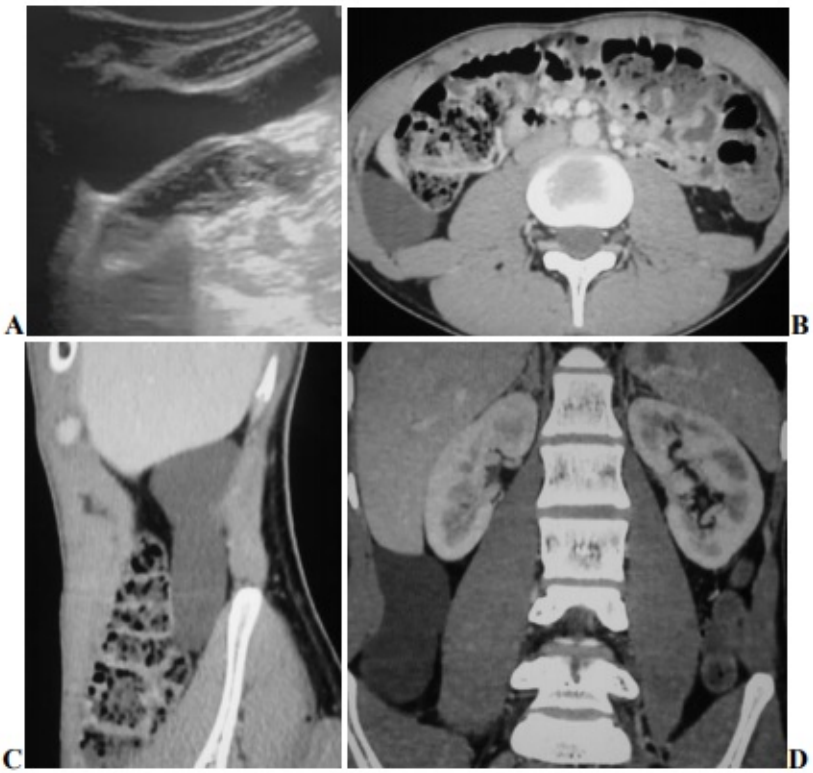
Diagnosis: Tumour of IVC (Leiomyosarcoma)

Case 162

Clinical Presentation

A 23-year-old man presented with right flank pain. No past medical history. The laboratory examination was unremarkable.

Radiological Findings



Abdominal ultrasound longitudinal section at right flank (A) and enhanced CT scan, axial (B) with sagittal / coronal reconstruction (C,D) images. The ultrasound section shows an anechoic thin-walled cystic structure in the paracolic gutter. On CT it appears hypodense homogeneous intimately related to the caecal wall located below the liver, posterior to right colon, medial to the transverse abdominis muscle and anterior to the quadrates lumborum muscle.

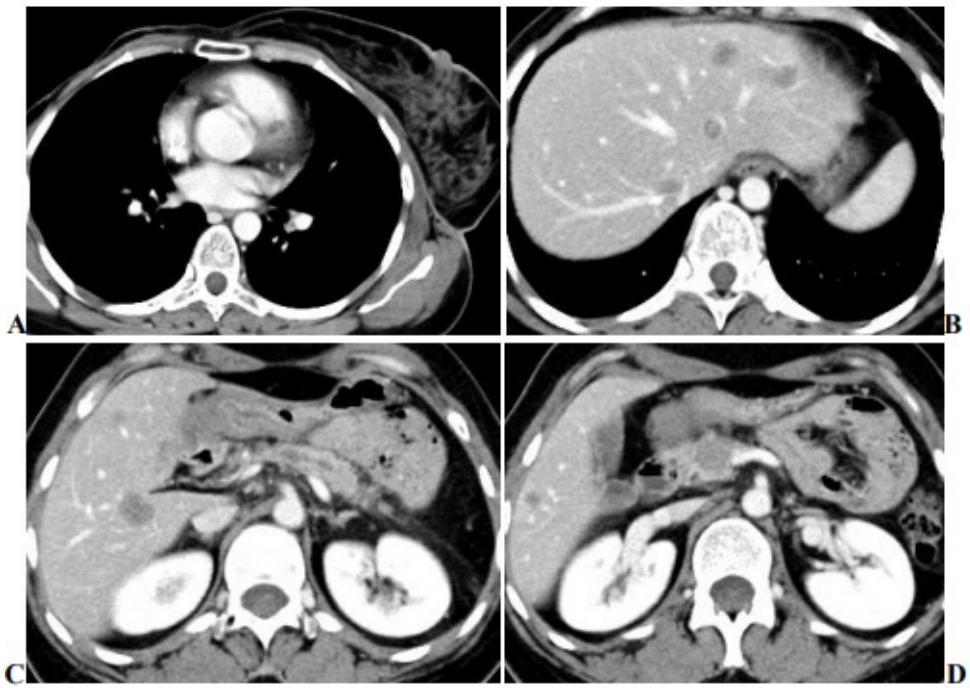
Diagnosis: Cystic Lymphangioma

Case 163

Clinical Presentation

A 31-year-old female had right mastectomy 3 years ago for breast carcinoma with no metastatic disease. She remained in her usual state of health with routine surveillance visits, demonstrating no recurrent disease. She presented with a chief complaint of 4 weeks of increasing epigastric postprandial pain and weight loss of approximately 10 lb over the same period of time. On examination, her abdomen was soft, non-tender, and without any evidence of ascites or hepatosplenomegaly. No intraabdominal masses were appreciated. An abdominal ultrasound was performed (not shown) which revealed multiple lesions of the liver.

Radiological Findings



Enhanced abdominal CT scan images show multiple solid, low-attenuation lesions within the liver, some of which have a more hypodense centre (areas of necrosis), consistent with metastatic disease. Note the presence of a solid hypodense mass at the isthmic region of the pancreas (image D) with dilated distal pancreatic duct (pancreatic metastasis in this case). On image A, the right breast is not seen (past history of total mastectomy).

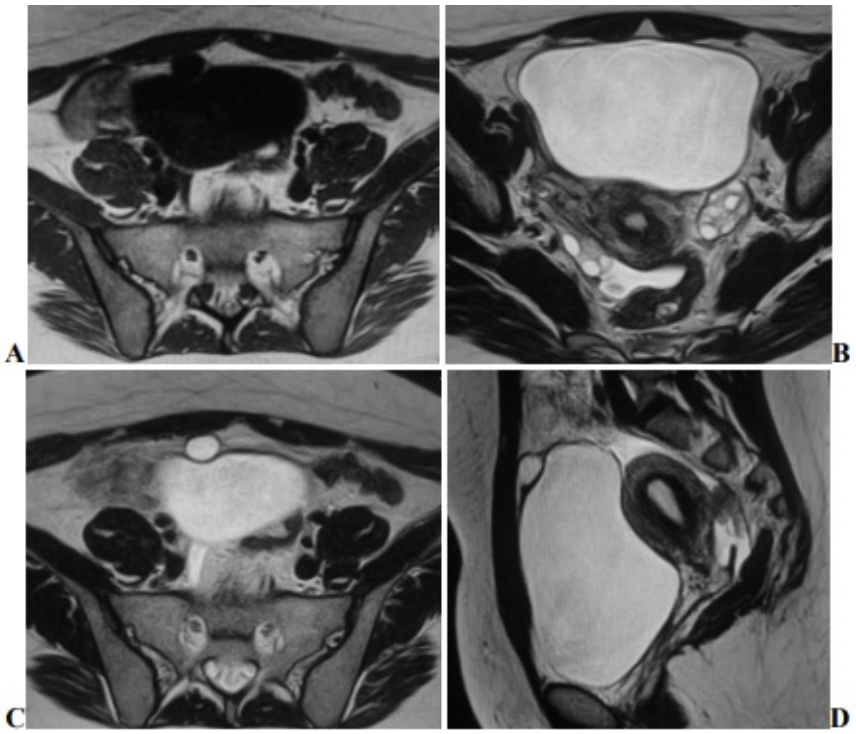
Diagnosis: Metastases to the Liver and Pancreas from Breast Carcinoma

Case 164

Clinical Presentation

A 25-year-old female patient with history of lower abdominal pain. The ultrasound showed a small cystic lesion between the urinary bladder and anterior abdominal wall.

Radiological Findings



MR scan of the pelvic region, axial T1 (A), axial and sagittal T2 (B, C, D) images showed a thin-walled cystic lesion with homogeneous content of low T1 and high T2 measuring approximately 1.5 cm in diameter, located at the anterosuperior part of the urinary bladder. There was no communication between the cystic lesion and urinary bladder or the abdominal wall. Note both ovaries are well-visualised and contain small follicles (image B).

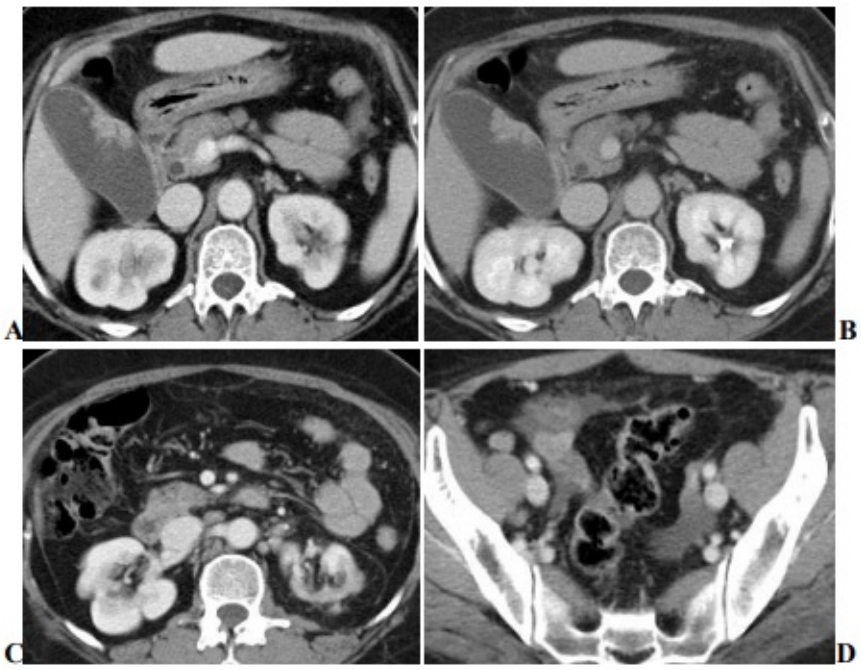
Diagnosis: Urachal Cyst

Case 165

Clinical Presentation

A 53-year-old woman treated since 3 months for tuberculous peritonitis presented with 2 months' history of right upper quadrant pain.

Radiological Findings



Enhanced abdominal CT scan images reveal an enhancing polypoid mass along the anterior aspect of the gallbladder lumen with thickened retracted gallbladder wall (which was missed on CT scan done 3 months ago). No perivesicular fat stranding or extension to the adjacent hepatic parenchyma. Note nodular thickening with enhancement of the parietal peritoneum and mesentery, enlarged lymph nodes in the inter-aorta-caval and lumboaortic regions and presence of mild ascites (tuberculous peritonitis under treatment). Sequelae of bilateral pylonephritis.

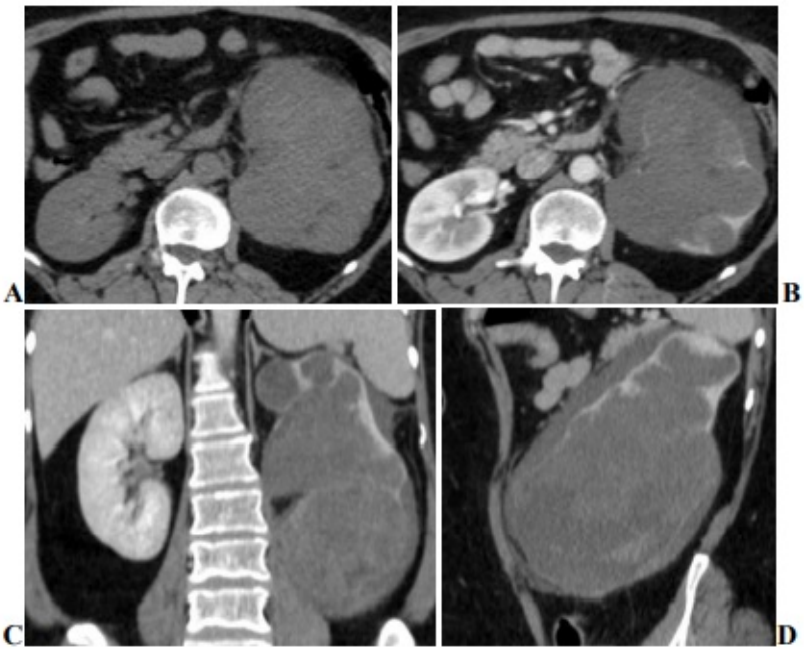
Diagnosis: Gallbladder Carcinoma in patient with Tuberculous Peritonitis

Case 166

Clinical Presentation

A 50-year-old woman of rural origin with long-stranding history of neglected left flank pain and low-grade fever. On investigation the WBC count was 13.3x10 3 / µL, urine albumin was in faint traces, microscopy revealed 65–70 pus cells / high-power field (HPF) and 10–12 RBCs / HPF. Culture revealed pseudomonas aeruginosa, 1 million colonies, sensitive to levofloxacin. The abdominal ultrasound revealed hydronephrotic left kidney paper-thin parenchyma with debris, internal echoes.

Radiological Findings



Pre-(A) and post-contrast (B) with coronal / sagittal reformatted (C, D) images demonstrate an enlarged left kidney with giant hydronephrosis containing a hyperattenuating material (pus). Globular shape of the dilated renal pelvis with atrophied renal parenchyma and perirenal fluid collection of same attenuation likely secondary to long- standing ureteropelvic junction obstruction. No left renal or ureteral stone was seen. The right kidney appears normal.

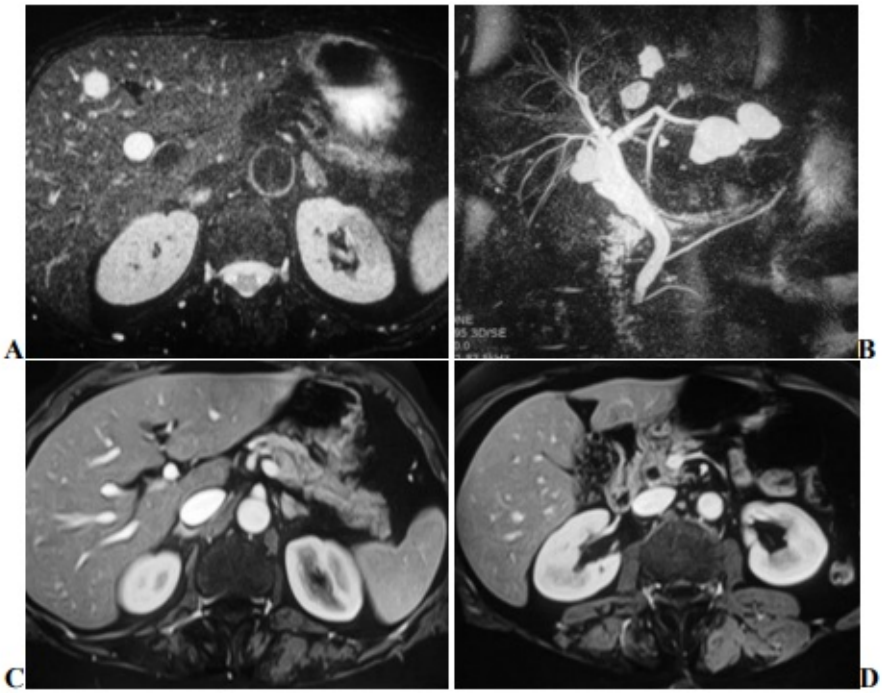
Diagnosis: Pyonephrosis of an Atrophied Obstructed Kidney

Case 167

Clinical Presentation

A 55-year-old female patient with past history of cholecystectomy 10 years ago presented with right upper abdominal pain. An abdominal ultrasound was performed and showed a dilated CBD.

Radiological Findings



MR scan, axial T2 fat saturation (A), coronal 3D-MRCP (B) and post-contrast T1 fat saturation (C, D) images. The MRCP image shows dilated CBD mainly in its supra-pancreatic segment with double pancreatic ducts, the dorsal pancreatic duct crossing the CBD posteriorly to drain into the expected location of the minor papilla; the ventral pancreatic duct drains into the major papilla together with CBD. Dorsal duct is larger than ventral duct and they are not communicated with each other. The pancreatic gland appears normal in size, signal intensity and enhancement. Note small biliary cysts.

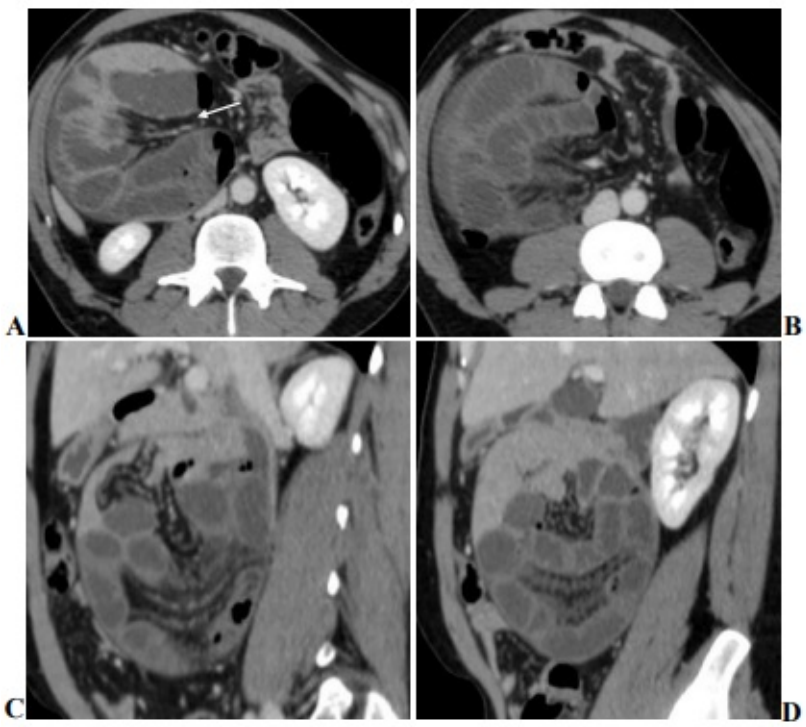
Diagnosis: Pancreas Divisum

Case 168

Clinical Presentation

A 34-year-old man presented with 4 hours of colicky right abdominal pain with 3 episodes of non-projectile vomiting. There was mild abdominal distension and he was able to pass flatus infrequently. He reported a history of similar complaints in the past fifteen days. On examination his vital signs are unremarkable, but there is marked guarding over the right umbilical area, with a palpable boggy and tender mass. Bowel sounds were not detected.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with sagittal reformatted (C, D) images. The repartition of bowel loops in the right paramedian region is highly suggestive of the presence of a spherical hernial sac containing dilated bowel loops with combined mesentery oedema. The mesenteric vessels are elongated with anterior and right displacement. Note narrowing at the sac entrance (arrow in A). There is no evidence of bowel infarction.

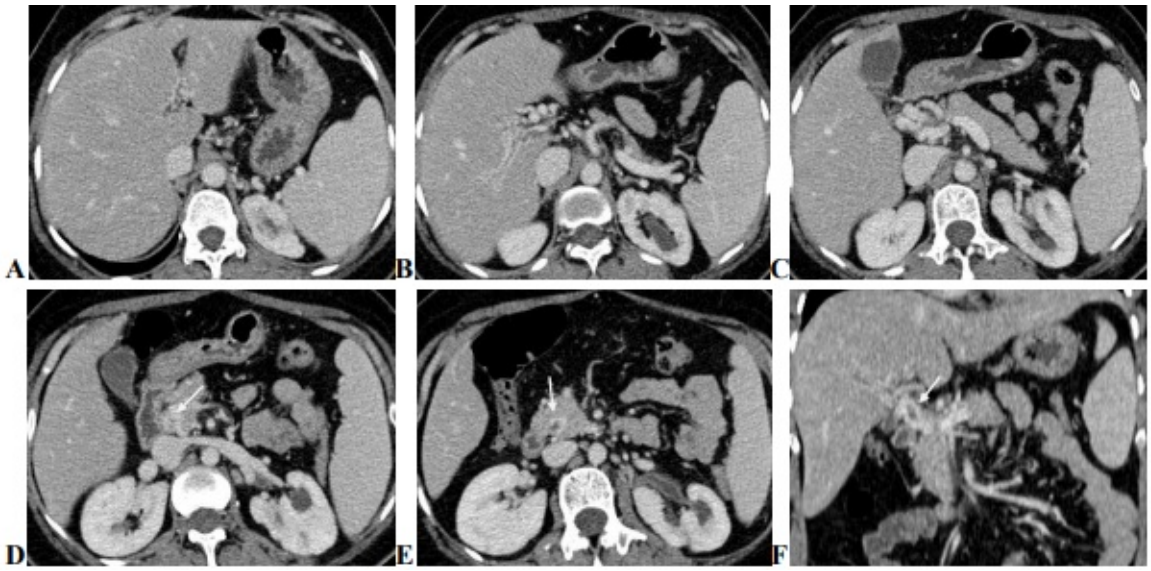
Diagnosis: Right Anterior Paraduodenal Internal Hernia

Case 169

Clinical Presentation

A 40-year-old woman presented with abdominal pain, jaundice and pruritus of 3 weeks' duration. The past medical history indicated that she was treated for portal vein thrombosis since 15 years ago.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B, C, D, E) with coronal reconstruction (F) images demonstrating a linear low-attenuation, intraluminal filling defect in the portal vein with numerous periportal network of collateral channels (cavernous transformation) indicating a long-standing PV thrombosis. Minimal intrahepatic biliary and CBD dilatation with peribiliary collateral vessels, producing segmental stenoses of the common bile duct (arrow in D, E and F). Spleen is moderately enlarged.

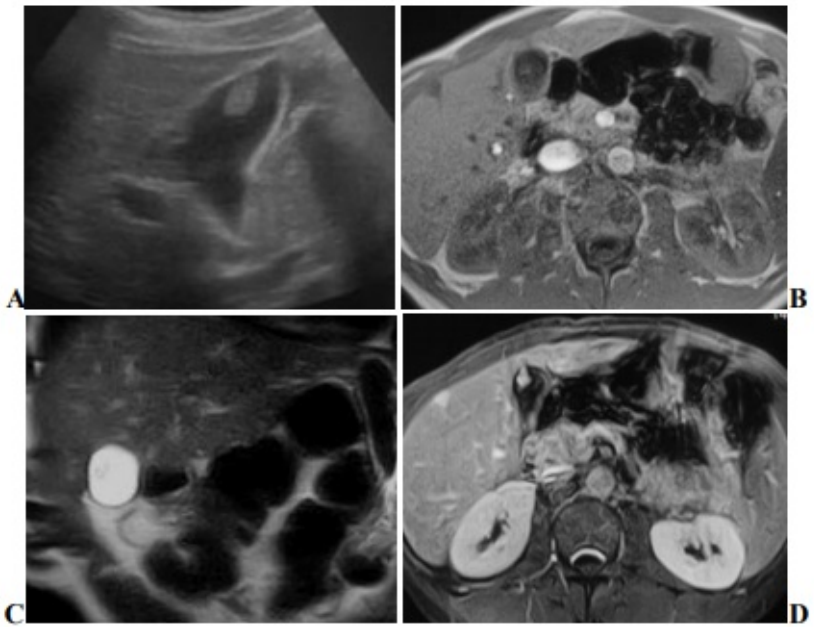
Diagnosis: Portal Biliopathy (or Ductopathy)

Case 170

Clinical Presentation

A 53-year-old male patient with history of upper abdominal discomfort.

Radiological Findings



Ultrasound section at the right hypochondrium (A) and MR scan, axial T1 GE in-phase (B), coronal T2 (C) and post-contrast axial T1 fat saturation (D) images. The ultrasound image revealed a small (1.8x1cm) echogenic mass adherent to the gallbladder wall (immobile) with no posterior shadowing. On MR images it appears of intermediate signal intensity on T1, slightly low signal intensity on T2 with enhancement after gadolinium administration. The adjacent liver parenchyma appears homogeneous. Note small haemangioma of the segment V.

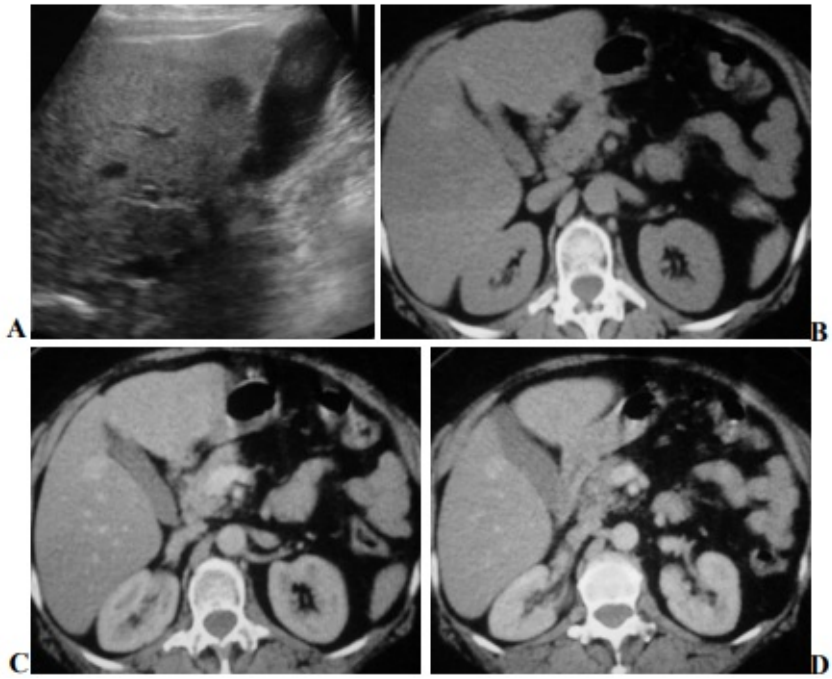
Diagnosis: Gallbladder Polyp (in this case)

Case 171

Clinical Presentation

A 45-year-old woman known case of diabetes type 2 presented with epigastric pain after a hearty meal.

Radiological Findings



Ultrasound section at the right hypochondrium (A), pre-(B) and post-contrast (C, D) abdominal CT scan images. The ultrasound section shows a hypoechoic area with angulated margins located near the gallbladder in the segment V, which is characteristic of focal sparring in a markedly echogenic fatty liver. On non-enhanced CT scan, this focal sparring shows an apparent hyperattenuation with normal enhancement (as normal liver parenchyma) on background of diffuse hepatic steatosis.

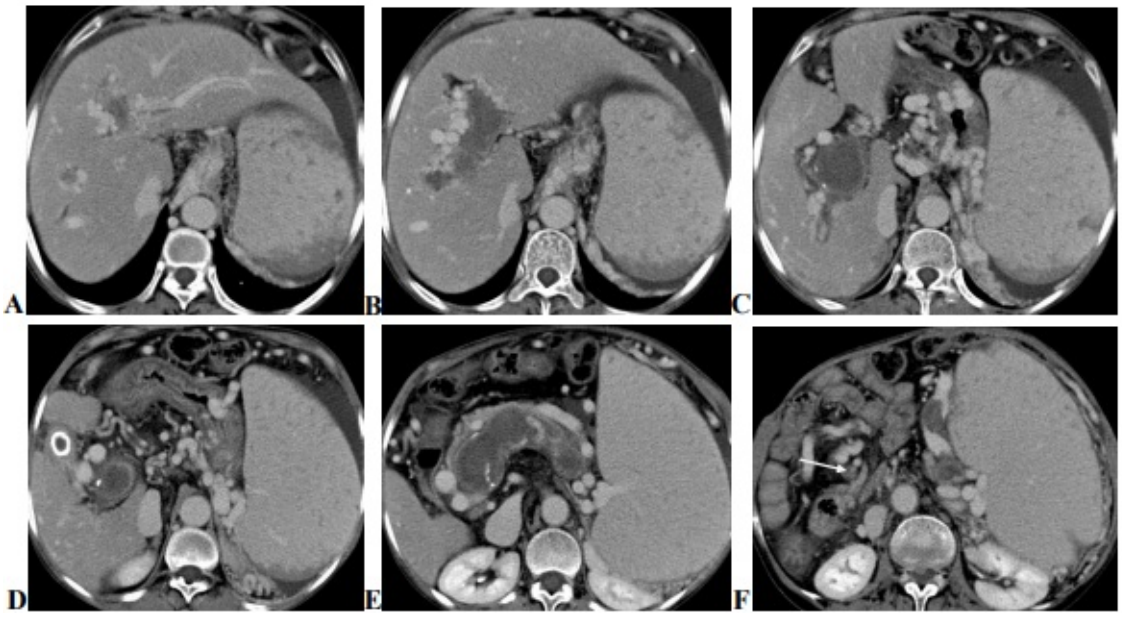
Diagnosis: Focal Sparing of Liver Parenchyma in Steatosis

Case 172

Clinical Presentation

A 59-year-old woman with history of gastrointestinal bleeding.The physical examination revealed a splenomegaly.

Radiological Findings



Enhanced abdominal CT scan images showing thrombosis of the portal vein and its branches, as well as the splenic vein and superior mesenteric vein (arrow in F) with numerous periportal veins (network of collateral channels) replacing the normal single channel of the portal vein (cavernous transformation). Extensive collateral circulation is also evident with gastric varices as a consequence of portal hypertension. The spleen is enlarged (25 cm) with low-attenuation areas of infarcts. Note perihepatic and perisplenic ascites. No bowel ischemia is seen. Gallstone is noted in image D.

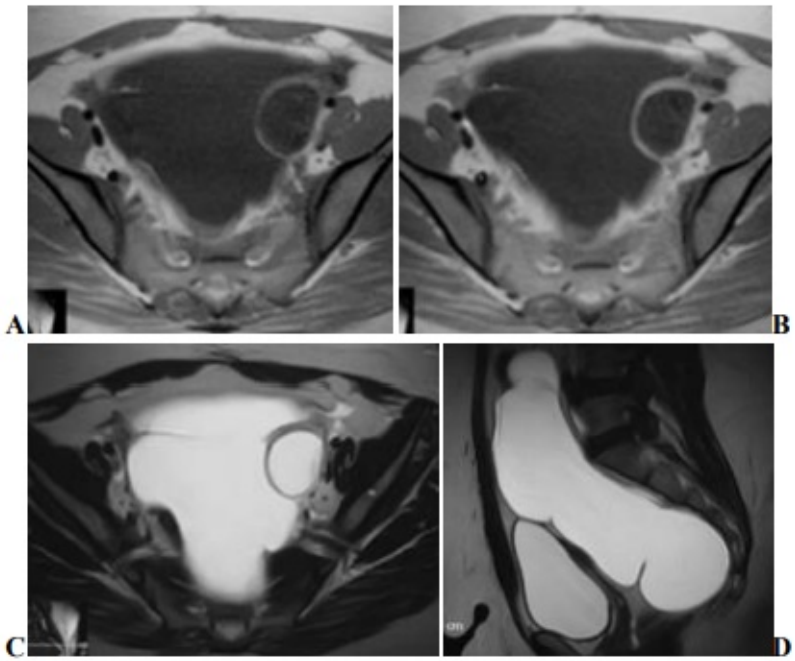
Diagnosis: Portal Hypertension Complicating a Portal Vein Thrombosis

Case 173

Clinical Presentation

A 38-year-old female patient had right ovariectomy 4 years ago and total hysterectomy 2 years ago presented with chronic pelvic pain. Ultrasound examination revealed a fluid pelvic collection.

Radiological Findings



Pelvic MR scan, pre-(A) and post-contrast (B) axial T1, axial / sagittal (C, D) T2 weighted images demonstrate a large pelvic partially septated fluid collection. The left ovary is visible containing a follicle. Right ovary and uterus are not visible (past history of ovariectomy and hysterectomy).

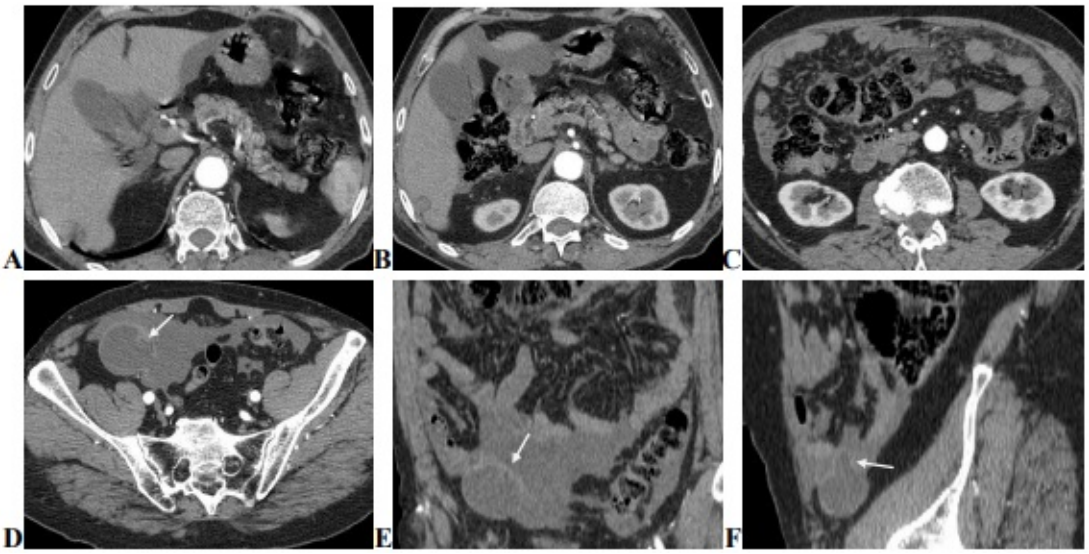
Diagnosis: Post-operative Lymphocele

Case 174

Clinical Presentation

A 70-year-old man with unremarkable medical history presented with an abdominal pain, mild abdominal distension and altered bowel habits of 6 months' duration. During the present evaluation, the blood results were normal but tumour markers, including CEA, Ca125 and Ca19.9, were considerably increased.

Radiological Findings



Enhanced abdominopelvic CT scan (arterial phase), axial (A, B, C, D) with coronal / sagittal reformatted (E, F) images showed a low density ascites causing scalloping of the liver surface (gelatinous ascites) with a cystic lesion (arrow in D, E and F) in the expected region of the appendix (appendiceal mucocele), surrounded by loculated peritoneal ascites.

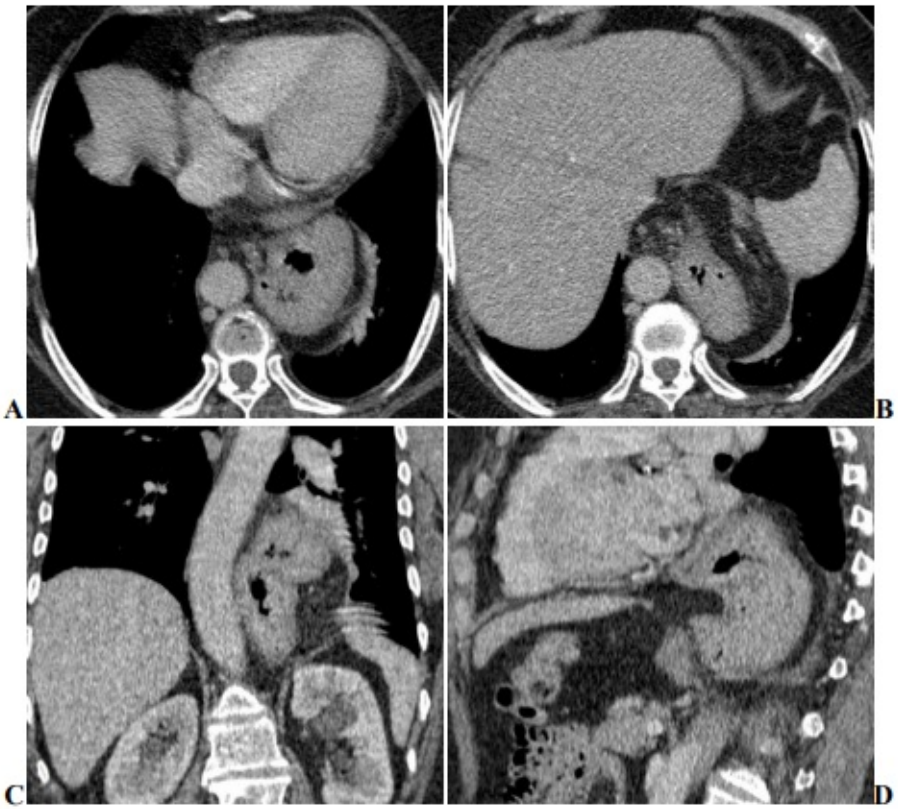
Diagnosis: Pseudomyxoma Peritonei from Appendiceal Mucocele (Mucinous Cystadenocarcinoma in this case)

Case 175

Clinical Presentation

A 75-year-old woman presented with chronic history of epigastric pain, postprandial fullness, nausea and vomiting.

Radiological Findings



Enhanced thoracoabdominal CT scan, axial (A, B) with coronal / sagittal reconstructed (C, D) images showing herniation of both the stomach and the gastro-oesophageal junction into the thorax through a large oesophageal hiatus. Note the stomach is not rotated, excluding the possibility of volvulus, and the antropyloric junction is located below the diaphragm.

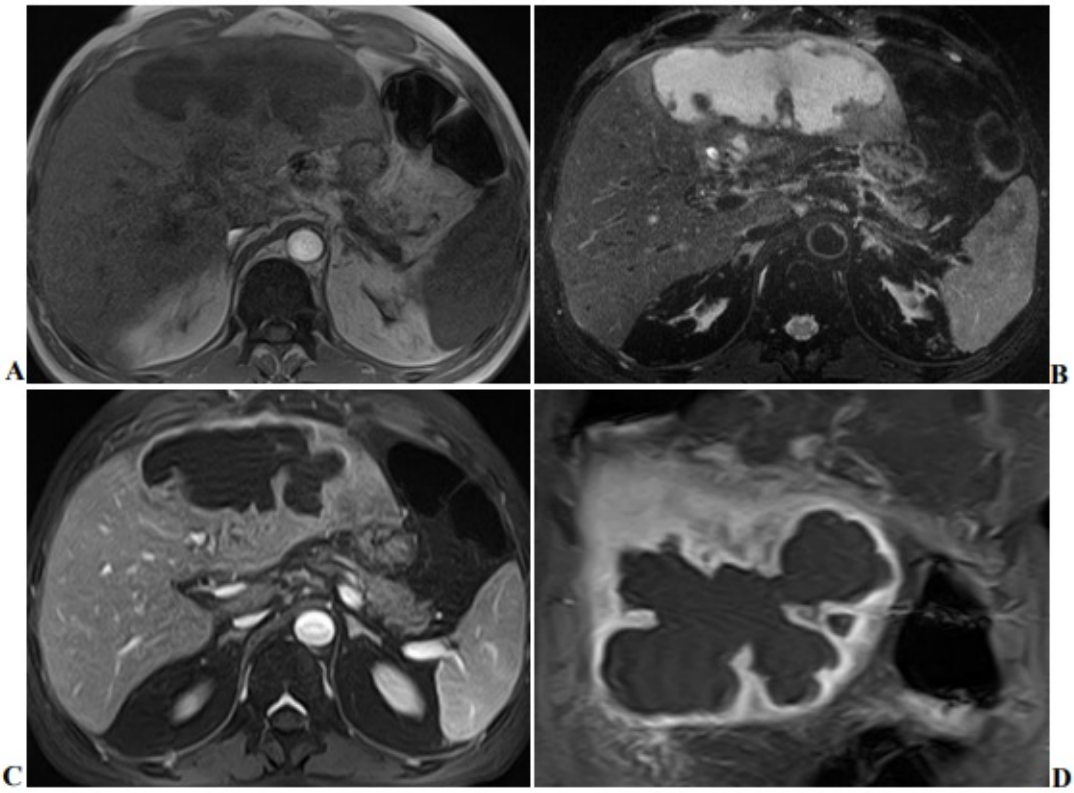
Diagnosis: Large Sliding Hiatal Hernia

Case 176

Clinical Presentation

A 63-year-old male with 2 and a ½ month history of fever, rigors, and weight loss. The physical examination revealed a palpable painful mass at the epigastric region.

Radiological Findings



MR scan, axial T1 (A), T2 (B) and post-contrast axial / coronal T1 fat saturation (C, D) images showing a large lobulated low T1, high T2 fluid collection in the left lobe of the liver with peripheral rim enhancement. Note perilesional oedema manifests as high signal intensity on T2-weighted image (usually seen in about 35% of liver abscesses).

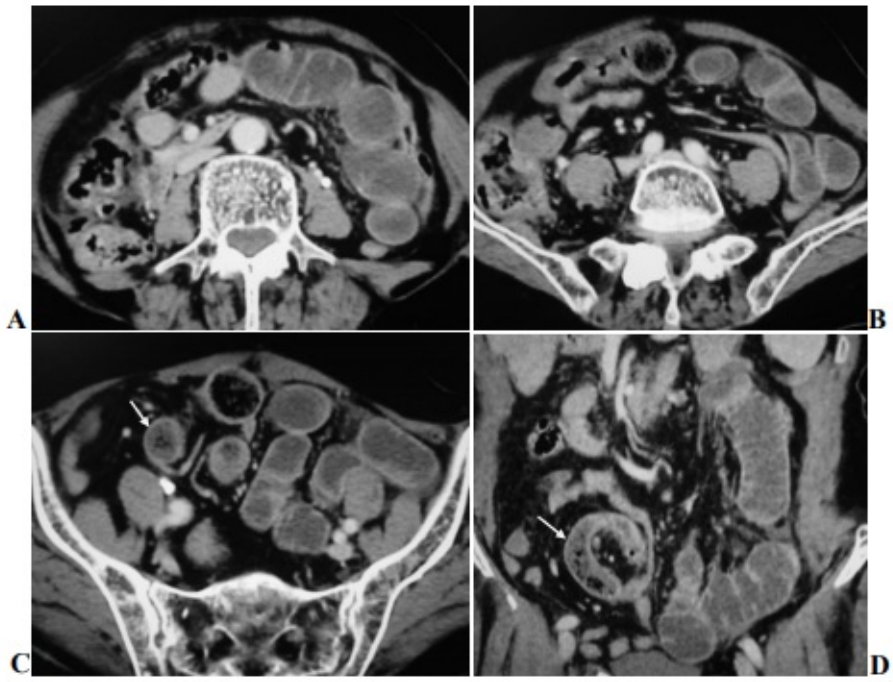
Diagnosis: Liver Abscess

Case 177

Clinical Presentation

A 78-year-old female patient presented with symptoms of intestinal obstruction. An abdominal ultrasound was performed and showed distended bowel loops up to right iliac fossa.

Radiological Findings



Enhanced abdominal CT scan (A, B, C) with coronal reconstruction(D) images demonstrate a dilated ileal loop with faeces sign (white arrow in C, D), twisted around mesenteric vessels giving the whirlpool appearance. The proximal small bowel loops are distended, but the distal small bowel loops and whole colon are not distended. No adhesions or ischemia were found in surgery.

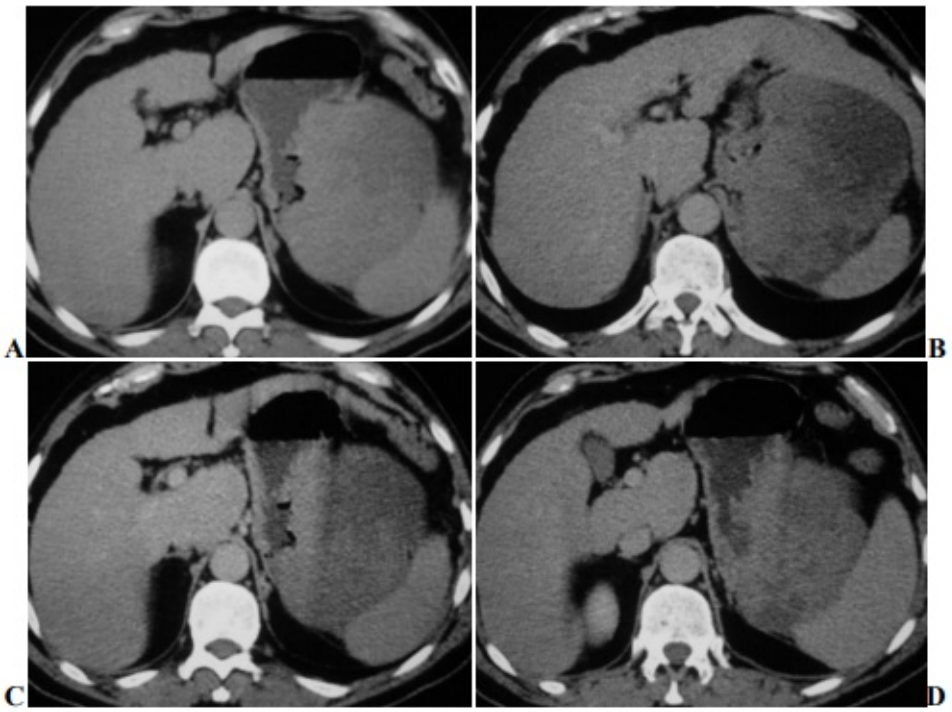
Diagnosis: Small Bowel Volvulus

Case 178

Clinical Presentation

A 64-year-old male patient known case of chronic liver disease presented with vague upper abdominal pain and feeling of an abdominal lump on and off for 3 years. There were no other associated general or GI tract symptoms. Clinical examination of the abdomen revealed a well- defined mobile intra-abdominal lump in the left hypochondrium.

Radiological Findings



Pre-(A) and post-contrast (B, C, D) CT scan images revealed a large soft tissue mass with mild and heterogeneous enhancement located in the intergastro-splenic region, inseparable from the posterior gastric wall. Note dysmorphic liver of irregular surface with hypertrophy of the caudate lobe and atrophy of the segment IV (cirrhotic liver).

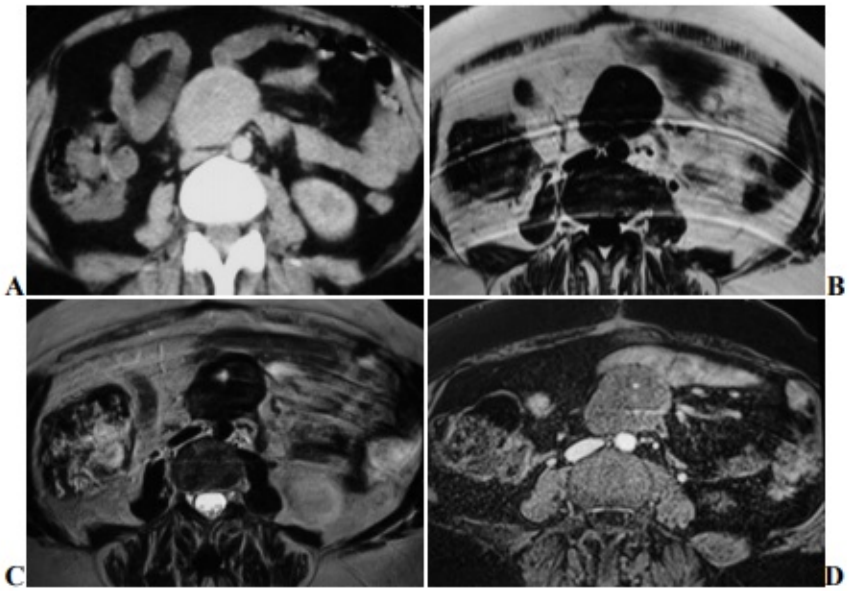
Diagnosis: Gastrointestinal Stromal Tumour (GIST) in patient with Liver Cirrhosis

Case 179

Clinical Presentation

A 55-year-old female patient with history of repeated vomiting and abdominal pain. The abdominal ultrasound revealed a solid hypoechoic mesenteric mass.

Radiological Findings



Enhanced abdominal CT scan (A) and MR scan, axial T1 (B), T2 (C) and post-contrast (D) Axial T1 fat-saturation images. The CT scan image shows an enhanced ovoid soft tissue mass in the root of the mesentery. The MR images show that the soft tissue mass is of regular contours, centred on the superior mesenteric artery, appearing hypointense on T1 and T2 with area of high signal intensity on T2 and showing mild enhancement on post-contrast axial T1 fat-saturation. The adjacent bowel loops are preserved on both CT and MR exam.

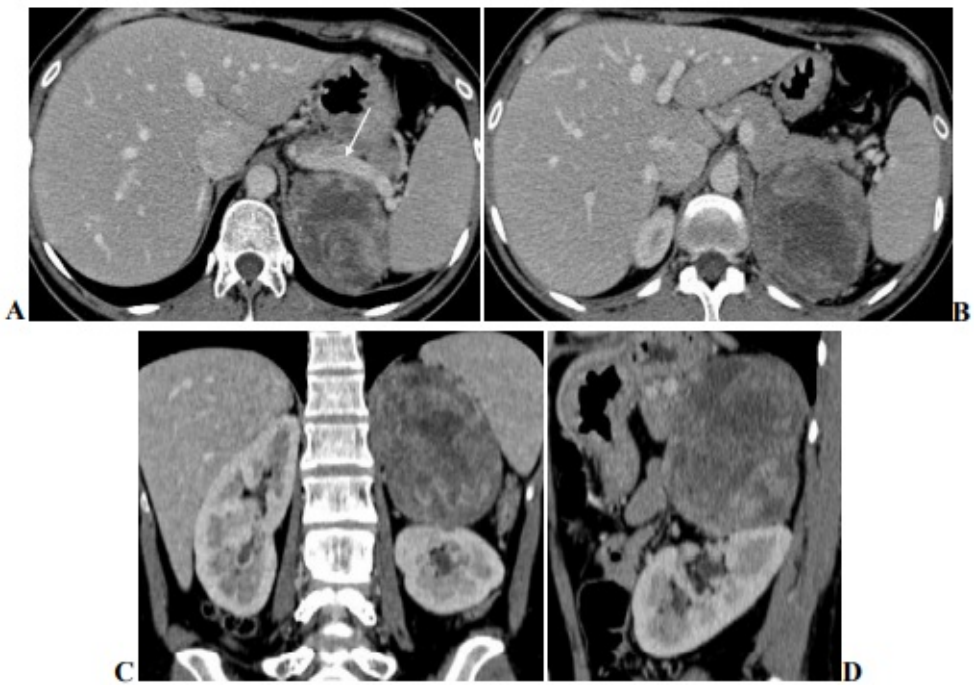
Diagnosis: Sclerosing Mesenteritis

Case 180

Clinical Presentation

A 35-year-old woman presented with 3 months' history of left upper quadrant pain.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reformatted (C, D) images showing a large well-circumscribed left adrenal mass with central necrotic area and heterogeneous enhancement of the solid component. The caudal segment of pancreas is displaced anteriorly and the upper pole of left kidney inferiorly. Note the adjacent splenic vein is patent (arrow in A). The right adrenal gland was of normal size and shape.

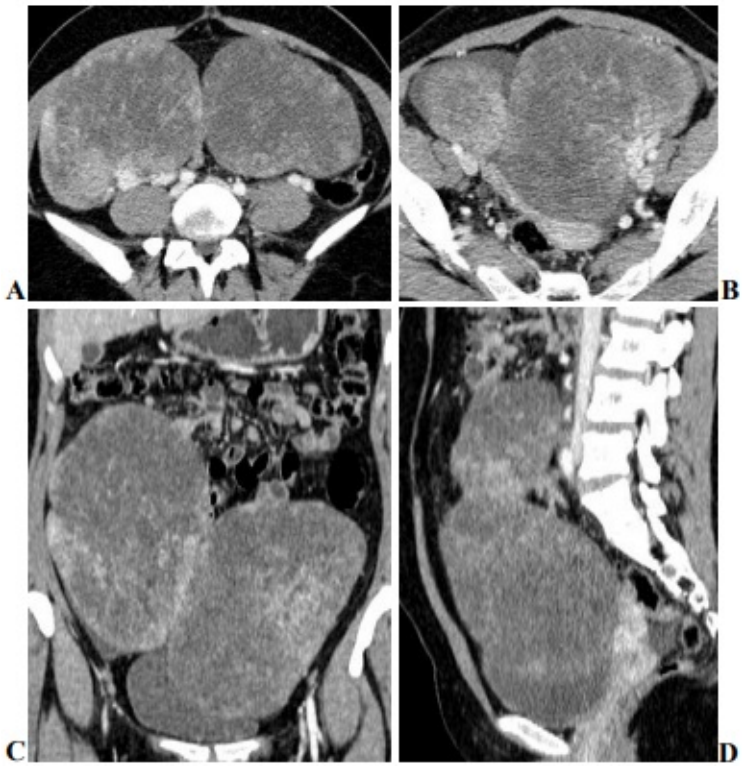
Diagnosis: Adrenal Cortical Carcinoma

Case 181

Clinical Presentation

A 34-year-old woman presented with abdominal distension and palpable abdominal masses. She had left mastectomy 3 years ago for breast carcinoma.

Radiological Findings



Enhanced abdominopelvic CT scan, axial (A, B) with coronal / sagittal reformatted (C, D) images showing two large heterogeneously enhancing masses arising from the ovaries, measuring 18 cm on the right and 19 cm on the left. Note mild ascites with nodular thickening of the peritoneal reflections and stranding of the omentum (peritoneal carcinomatosis).

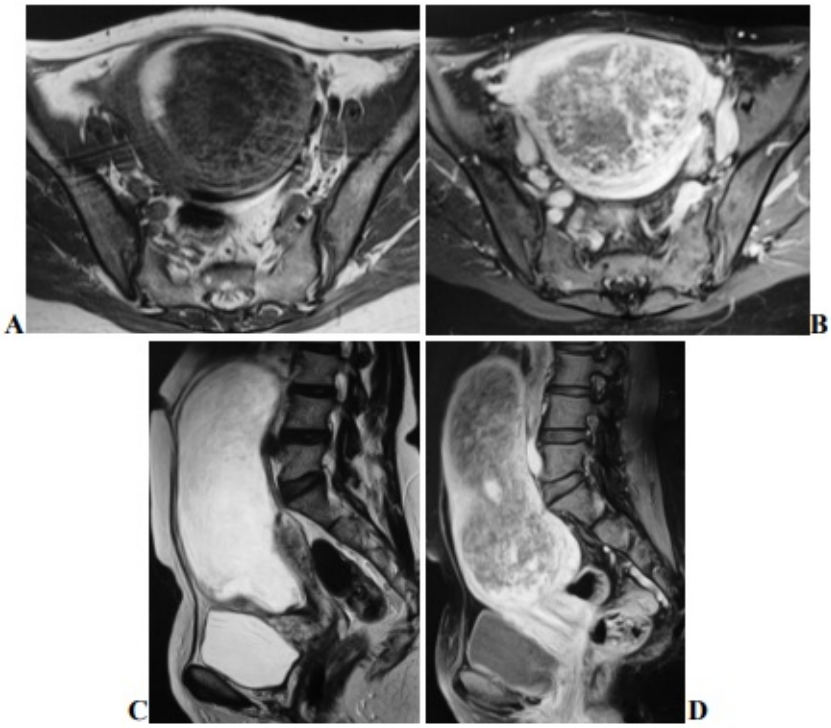
Diagnosis: Krukenberg'sTumour

Case 182

Clinical Presentation

A 45-year-old female patient presented with pelvic pain and vaginal bleeding. An ultrasound examination was performed, showing a pelvic mass. The Beta-HCG was at 9570 IU.

Radiological Findings



MR scan, axial T1 (A), sagittal T2 (C) and post-contrast axial / sagittal (B, D) T1 fat-saturation images show a large intrauterine mass with small cystic areas, enlarging the uterine cavity of inhomogeneous low signal intensity on T1 with area of haemorrhage of high signal, and high signal intensity on T2 with heterogeneous enhancement after gadolinium administration. Note the myometrium is laminated well- visualised on sagittal T2 and on post-contrast axial and sagittal images. No intrauterine fetus was seen.

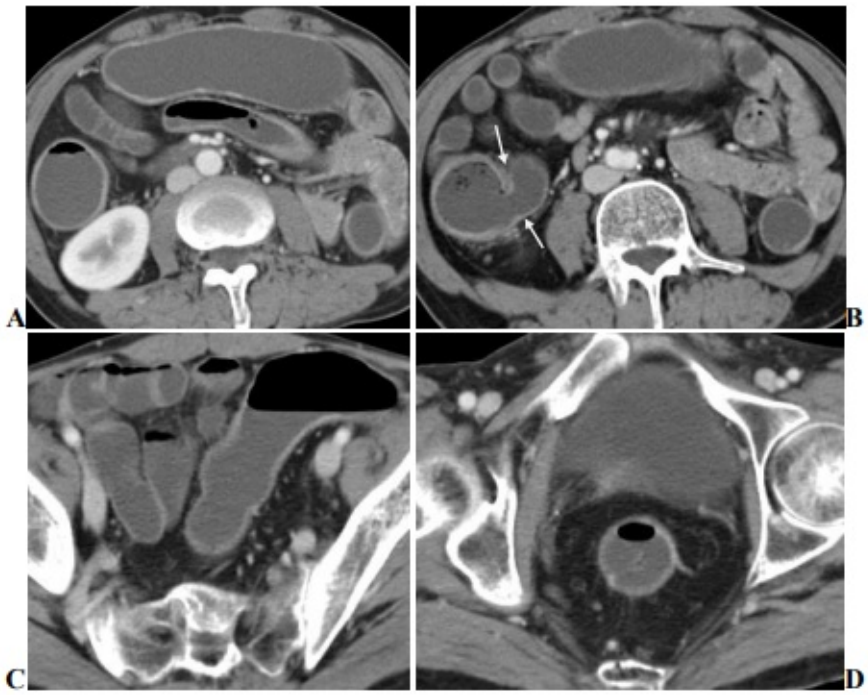
Diagnosis: Complete Hydatiform Mole

Case 183

Clinical Presentation

A 59-year-old woman with abdominal pain and diarrhoea.

Radiological Findings



Enhanced Abdominopelvic CT scan images showing the disappearance of normal morphology of the colon with a tubular appearances from the rectum to the caecum with thick enhanced wall, prominent pericolic fat halo and engorgement of the vasa recti. Small enlarged nodes are seen in the perirectal fat, retroperitoneum, and mesentery, all are likely reactive. Note the enlarged ileocaecal valve (arrows in B). No mass can be identified here or elsewhere along the colon. The upper abdominal solid viscera are unremarkable.

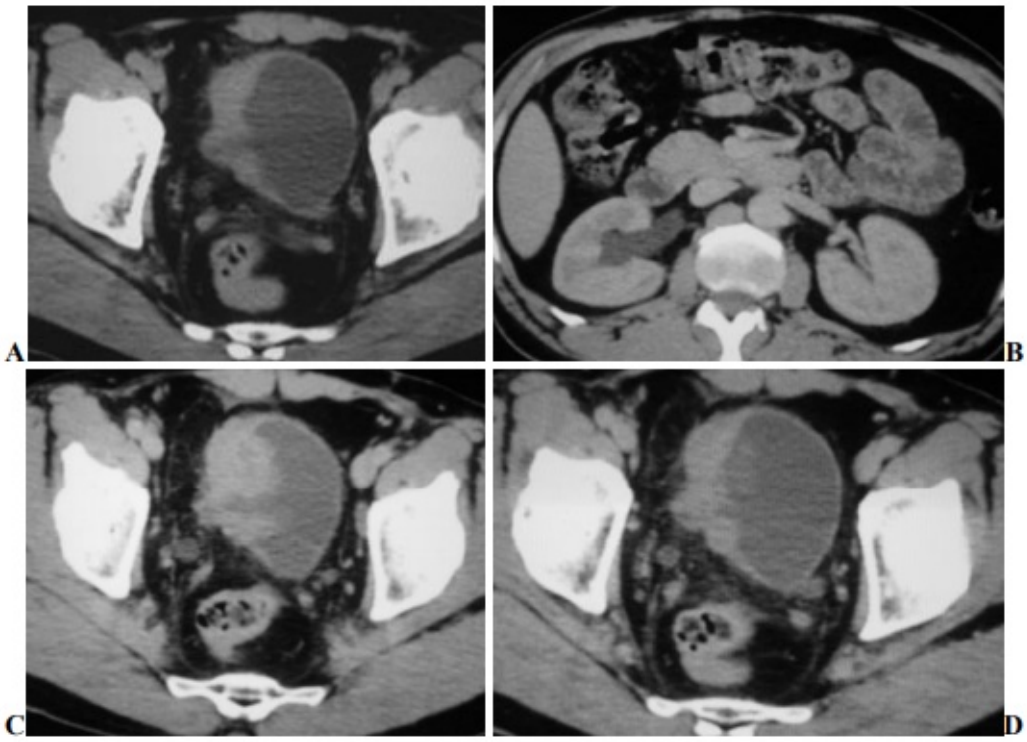
Diagnosis: Ulcerative Colitis

Case 184

Clinical Presentation

A 57-year-old male patient with 6 months' history of right flank pain and macroscopic haematuria.

Radiological Findings



Pre-(A) and post-contrast (B, C, D) Abdominopelvic CT scan images showing an irregular thickening with soft tissue mass of the right lateral vesical wall and vesical floor which are retracted with heterogeneous enhancement, infiltrating the perivesical fat and the vesico-ureteric junction (not shown) with right ureterohydronephrosis.

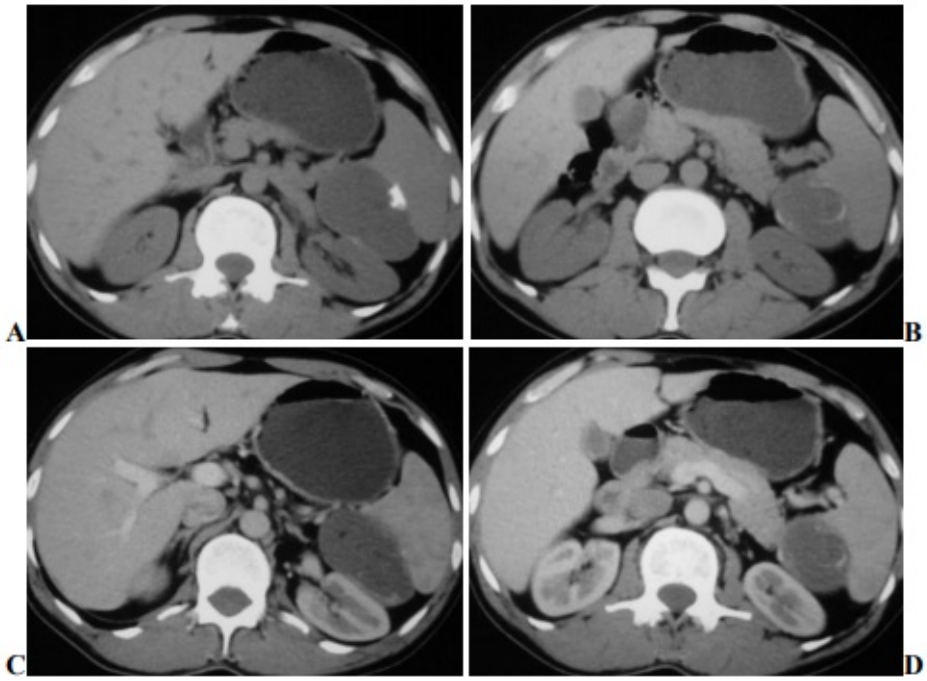
Diagnosis: Transitional Cell Carcinoma of Bladder

Case 185

Clinical Presentation

A 53-year-old male patient presented with left upper abdominal pain, dyspepsia and heart burn for the past 2 years. Pain was dull, aching and intermittent in nature, and increases after intake of meal. It resolved spontaneously after 1–2 hours. There was no history of pet dogs or sheep at home. Abdominal examination showed no organomegaly. Laboratory blood tests were all within normal limits. X-ray chest and abdomen were unremarkable except foci of calcification in the left hypochondrium. The upper GI endoscopy was normal.

Radiological Findings



Abdominal CT scan, pre-(A, B) and post-contrast (C, D) images showing an ovoid cystic mass in the left hypochondrium of inter-splenorenal location with foci of peripheral calcification and fluid content. At surgery this cystic mass was independent from spleen, pancreas and left kidney.

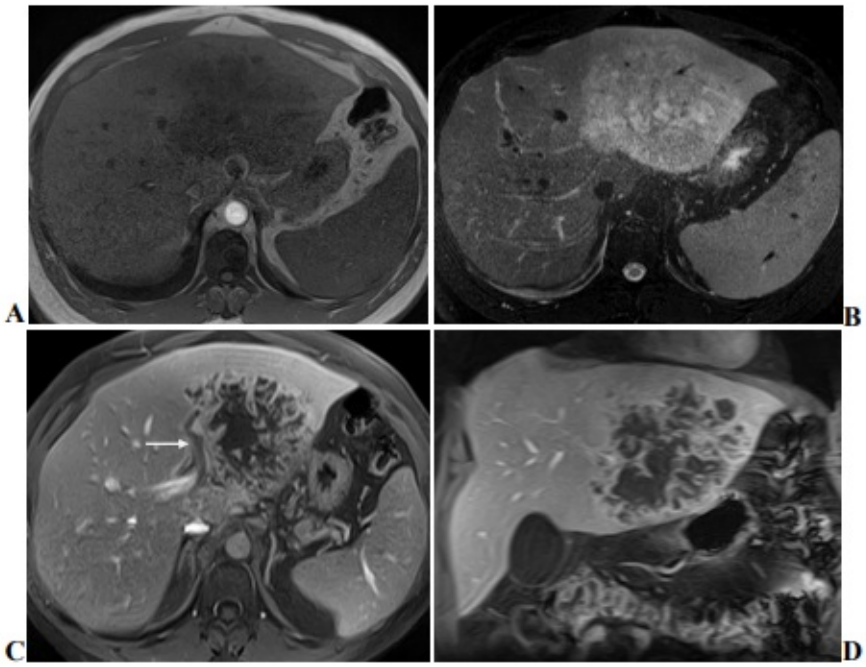
Diagnosis: Inter-splenorenal Hydatid Cyst

Case 186

Clinical Presentation

A 44-year-old man presented with 10 days' history of right upper quadrant pain, fever, anorexia and malaise.

Radiological Findings



MR scan, axial T1 (A), T2 fat- saturation (B) and post-contrast axial / coronal T1 fat saturation (C, D) images showing a large low T1, heterogeneous high T2 irregular complex mass within the left lobe of the liver composed of multiple small coalescent lesions with heterogeneous enhancement forming "cluster sign". The left portal vein adjacent to the lesion appears thrombosed (arrow in C), indicating pylephlebitis.

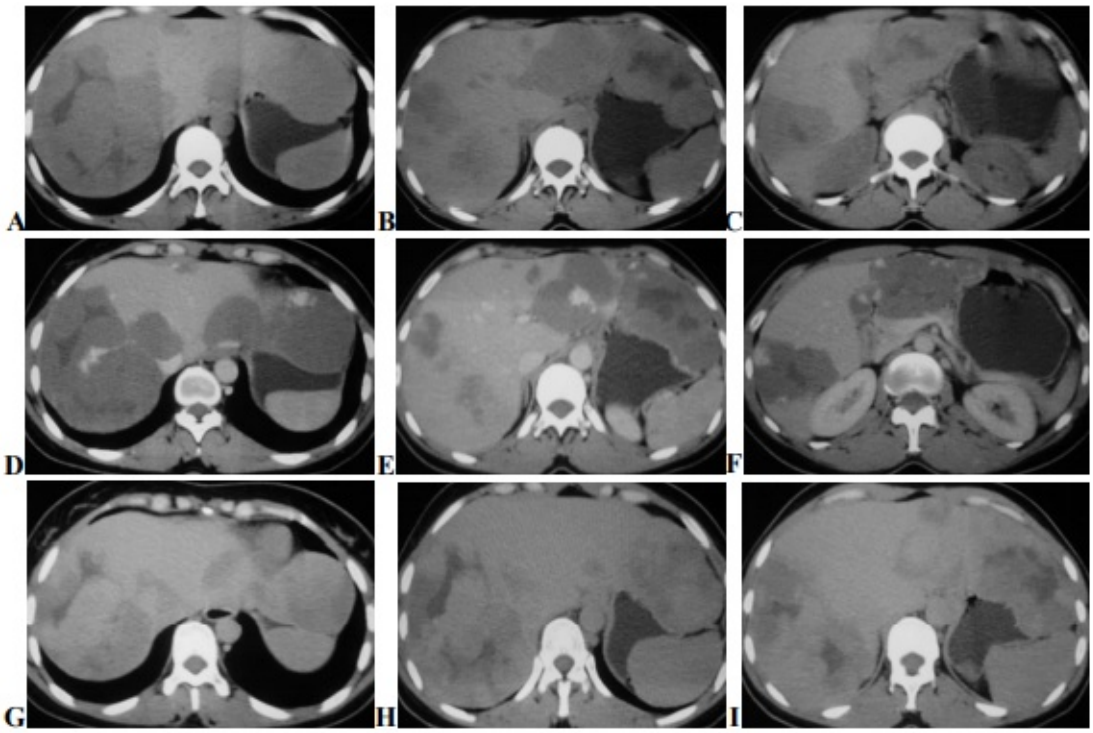
Diagnosis: Liver Abscess with Pyeliphlebitis

Case 187

Clinical Presentation

A 38-year-old female patient with history of right upper abdominal discomfort. Laboratory investigations revealed normal liver function tests. The abdominal ultrasound (not shown) revealed multiple lobulated heterogeneous hyperechoic masses.

Radiological Findings



Abdominal CT scan, pre-contrast (A, B, C), post-contrast arterial phase (D, E, F) and delayed phase (G, H, I) images. The liver shows multiple heterogeneous hypodense lesions disseminated in both lobes with early peripheral nodular discontinuous enhancement on arterial phase, progressive centripetal enhancement with incomplete central filling of the lesion on delayed phase (central scar does not enhance).

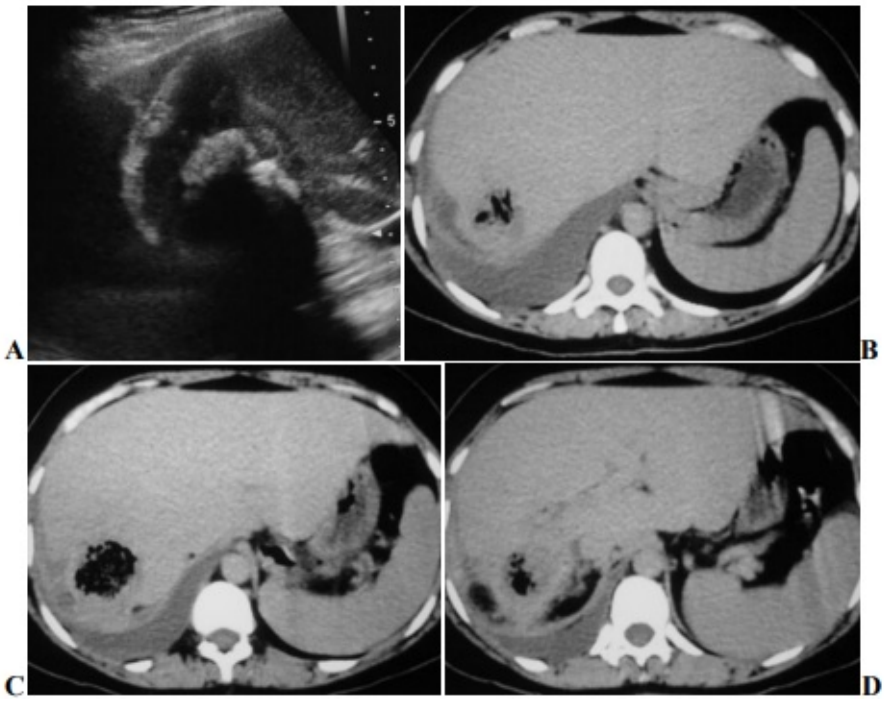
Diagnosis: Cavernous Haemangiomas

Case 188

Clinical Presentation

A 43-year-old female patient operated 2 months ago for hydatid cyst of liver and since then, she is complaining of right lower thoracic pain with pleural effusion, not improved after treatment.

Radiological Findings



Abdominal Ultrasound, longitudinal section of the right hypochondrium (A), and post-contrast CT scan (B, C, D) images. The ultrasound image shows a subphrenic echogenic structure with posterior shadowing partially surrounded by fluid collection and right pleural effusion. On CT scan this structure contains air bubbles with thick peripheral fibrous capsule and surrounded effusion. Note right pleural effusion.

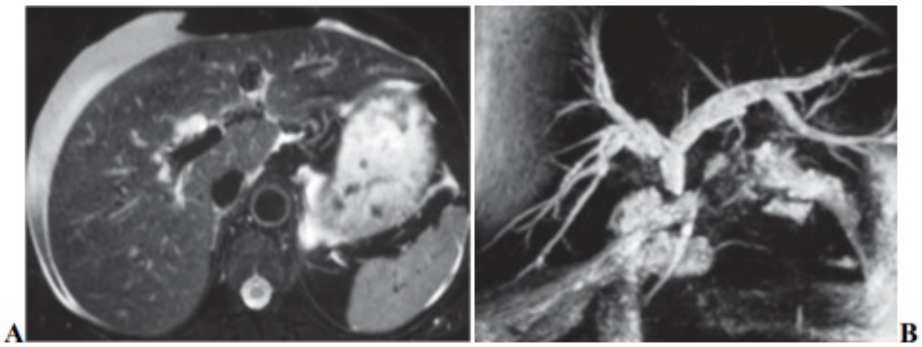
Diagnosis: Subphrenic Foreign body (Textiloma or Gossypiboma)

Case 189

Clinical Presentation

A 54-year-old female patient operated a few days ago for cholilithiasis (Coeliscopic approach) presented with jaundice and abdominal pain.

Radiological Findings



MR scan, axial T2 (A) and MRCP-3D (B) images show moderate dilatation of the intra-and extrahepatic biliary ducts caused by short tight stricture at the distal common hepatic duct (CHD) just above the cystic duct >2 cm from the hepatic duct confluence. The CBD appears normal in size. Note intraperitoneal effusion (biloma).

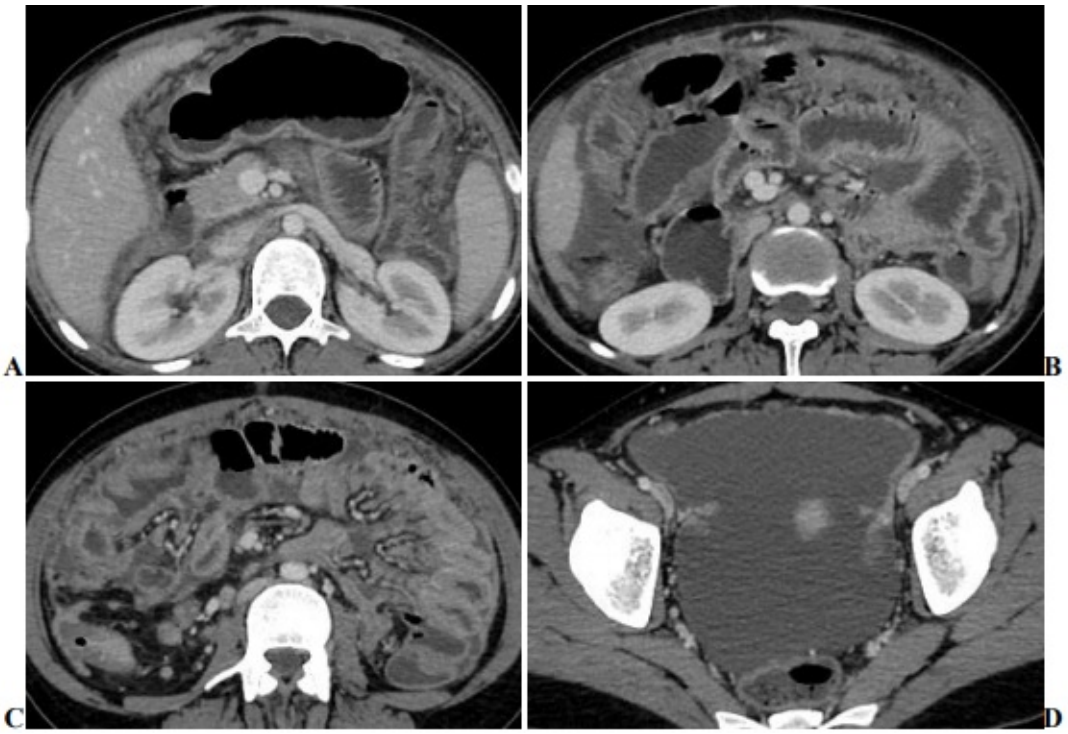
Diagnosis: Iatrogenic Bile Duct Injury (Type E1 of Strasberg Classification)

Case 190

Clinical Presentation

A 20-year-old female patient with 3 months' history of gradual vague complaints of fever, abdominal pain and distension, weight loss, anorexia, lethargy and change in bowel habit. The tumoural markers were negative.

Radiological Findings



Enhanced abdominal CT scan images reveal an intraperitoneal effusion with nodular thickening and diffusely enhancing peritoneal reflections and omental 'cake-like' mass with fixed bowel loops. Thickened small bowel with mesenteric lymphadenopathy.

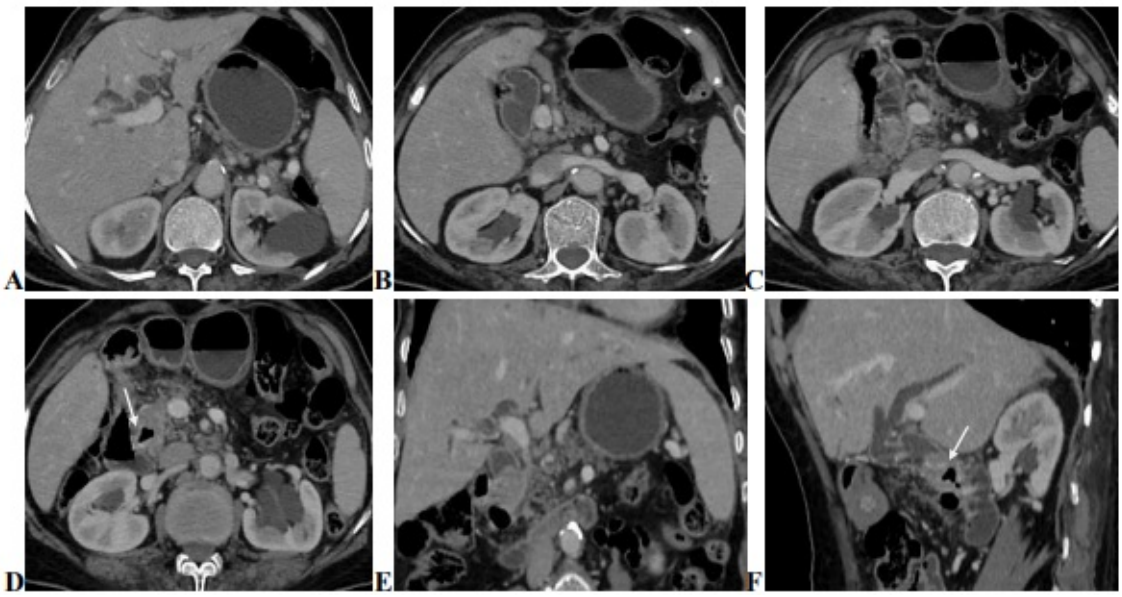
Diagnosis: Peritoneal Tuberculosis

Case 191

Clinical Presentation

A 78-year-old female had cholecystectomy 15 years ago presented with intense epigastric pain, nausea, vomiting and jaundice.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B, C, D) with coronal / sagittal reconstruction (E, F) images showing a dilatation of the IHBD and CBD with a big stone in distal CBD. Note a duodenal diverticulum with thickened enhancing wall located on the medial border of the second portion of duodenum (arrow in D, F), which can mimic a necrotic neoplasm in the ampullary region or pancreatic head. Note infiltration of the mesenteric root with periportal lymphadenopathy. Both kidneys show parapelvic cysts with left cortical cyst.

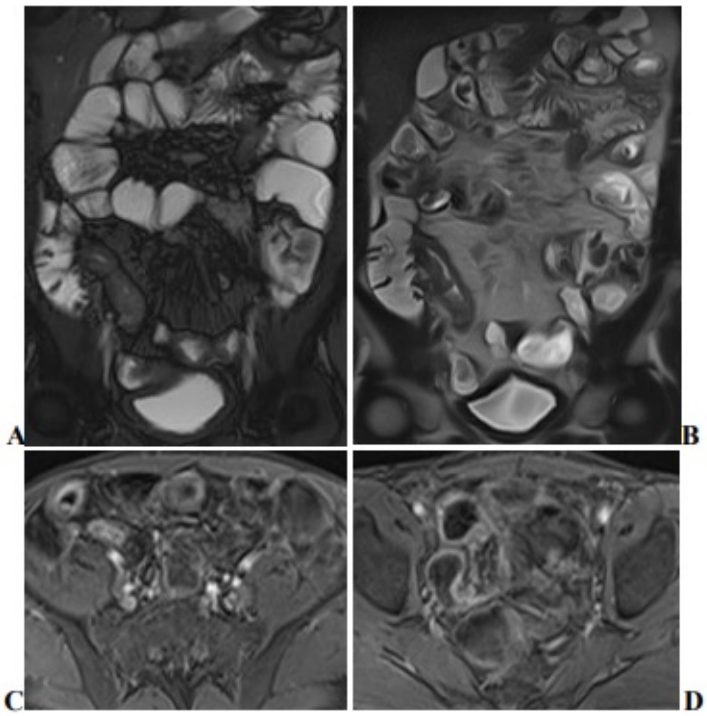
Diagnosis: Duodenal Diverticulitis in patient with Dilated IHBD / CBD on CBD Stone

Case 192

Clinical Presentation

A 29-year-old male with 1 and a ½ year history of abdominal pain, diarrhoea and weight loss.

Radiological Findings



MR-Enterography, coronal SSFP and T2 FASE (A, B) and post-contrast T1 GE (C, D) images showing a long stenotic segment in the terminal ileum (length=14.5 cm in this case), seen as diffuse thickening with transmural enhancement of the distal ileum. There is moderate prestenotic dilatation of the bowel loops. Note hypervascularity in the adjacent mesentery (Comb sign) with fibrofatty proliferation.

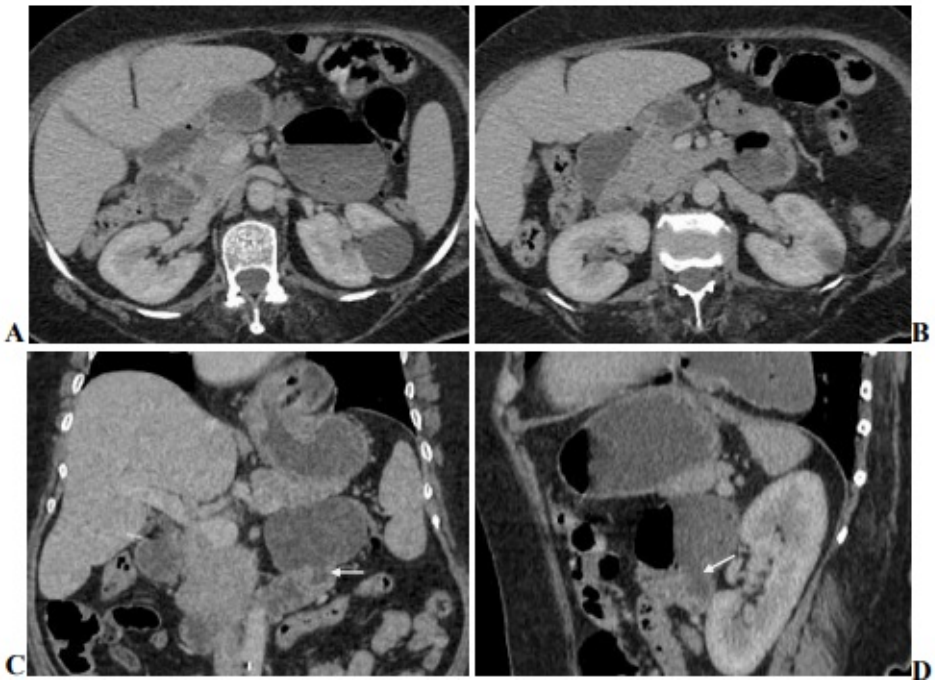
Diagnosis: Active Crohn's Disease

Case 193

Clinical Presentation

A 64-year-old female had cholecystectomy 13 years ago presented with postprandial fullness, nausea and vomiting.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B) with coronal / sagittal reconstruction (C, D) images showing a saccular outpouching from the distal duodenum at the level of Treitz angle, containing an air-fluid level and communicating with the duodenal lumen (arrow in C and D) . Note that the patient had also a sliding hiatus hernia.

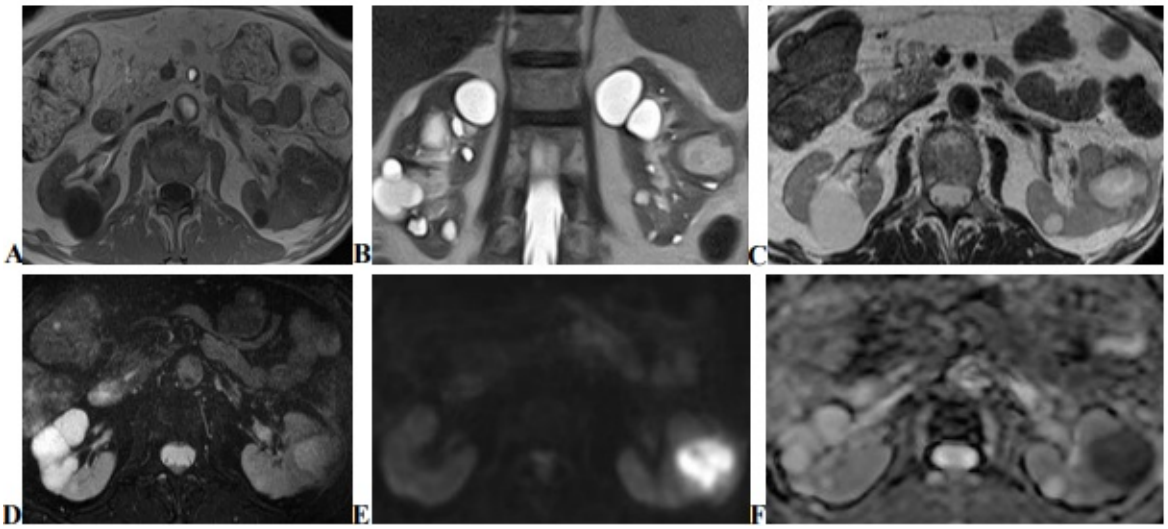
Diagnosis: Large Duodenal Diverticulum with Sliding Hiatus Hernia

Case 194

Clinical Presentation

A 72-year-old man presented with 1-week history of fever and left flank pain. His past medical records included type 2 diabetes and hypertension.

Radiological Findings



Abdominal MR scan, axial T1 (A), coronal T2-SSFP (B), axial T2 / T2 fat saturation (C, D) and DWI / ADC (E, F) images demonstrate bilateral innumerable cortical renal cysts of various size. One of these cortical cysts of the left kidney shows a thickened wall with high signal content on DWI, low ADC and thickened adjacent renal fascia, suggestive of infected renal cyst.

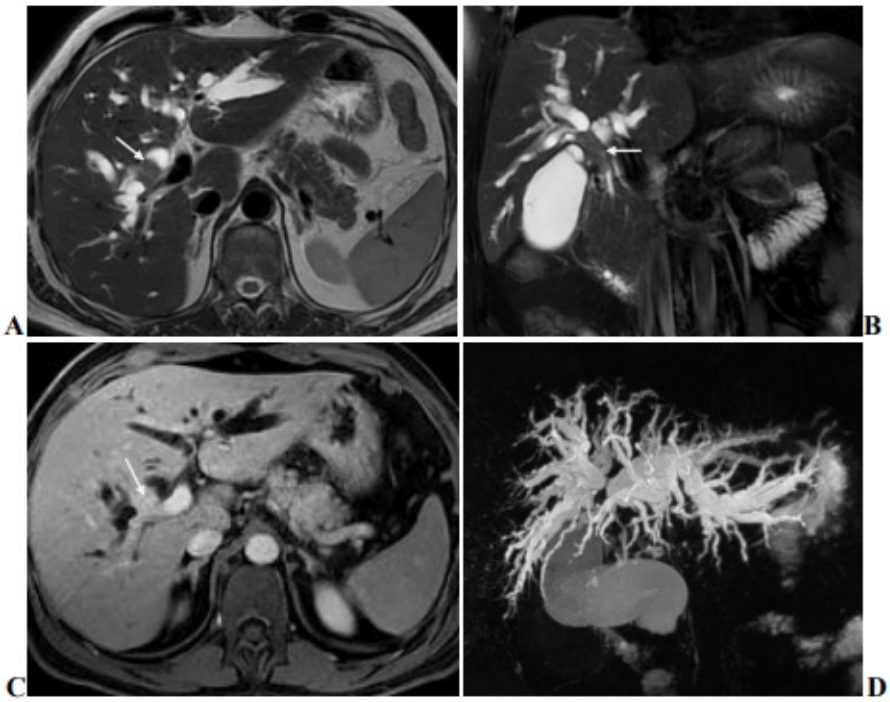
Diagnosis: Infected Renal Cyst

Case 195

Clinical Presentation

A 50-year-old male with 6 months' history of insidious development of non-painful jaundice.

Radiological Findings



MR scan, axial T2 (A), coronal T2 fat saturation (B), post-contrast axial T1 fat saturation (C) and 3D-MRCP (D) images showing a soft tissue mass of intermediate signal intensity on T2 (arrow in A, B) with enhancement after gadolinium administration (arrow in C) occurring at the bifurcation of the common hepatic duct with upstream dilatation of all intrahepatic bile ducts. The 3D- MRCP shows the degree and location of the biliary tree stricture. The common bile duct is of normal calibre.

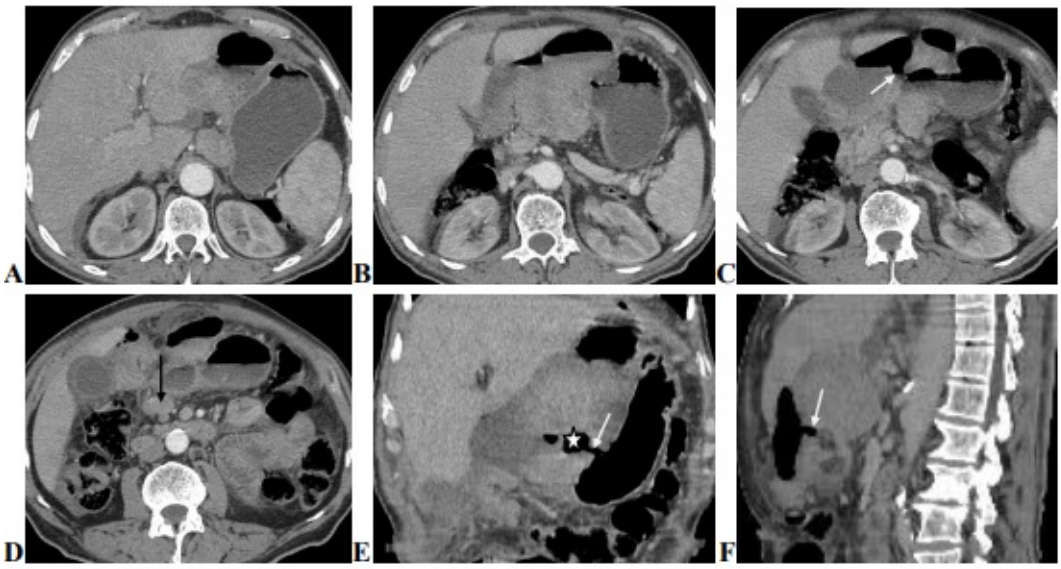
Diagnosis: Klatskin'sTumour

Case 196

Clinical Presentation

A 73-year-old male presented to the ER with 48 hours' history of sudden onset, severe, epigastric pain and vomiting. His past medical history included reflux symptoms treated with antacids and omeprazole by his general practitioner. He had no recent use of non-steroidal anti-inflammatory drugs or steroids. He was an ex-smoker. Further history revealed that he had noticed no weight loss but he did report 'black, sticky' stools in the year prior to admission.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B, C, D) with coronal / sagittal reconstruction (E, F) images. The images depict a large exophytic soft tissue mass arising from the wall of the lesser curvature and filling the lesser omentum. The tumour has central necrosis (star in E) with fistulous tract communicating with the gastric lumen (arrow in C, E and F) and presence of large collection with air-fluid level in the lesser omentum. Note mild ascites, thickening and enhancement of peritoneal reflections, stranding and thickening of the omentum, indicating peritoneal carcinomatosis. Enlarged mesenteric lymph nodes with thrombosis of the SMV (black arrow in D).

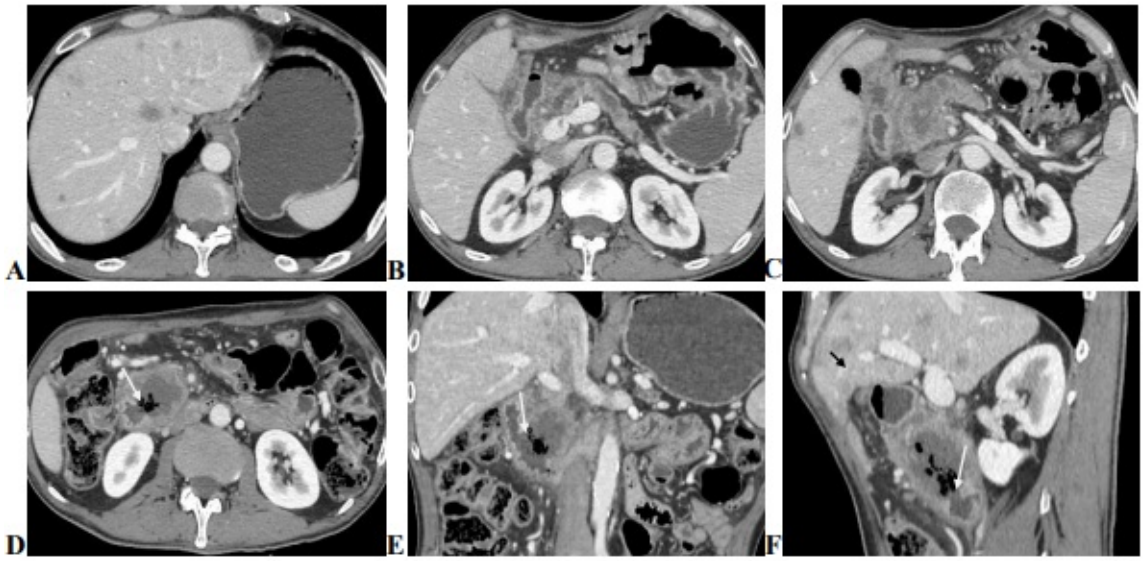
Diagnosis: Perforated GIST with Peritoneal Carcinomatosis and SMV Thrombosis

Case 197

Clinical Presentation

A 60-year-old man with history of surgery 5 months ago for an obstructive jaundice. He had jejunal resection 20 cm distal to the Teitz angle with double anastomosis, bilio-jejunal and gastro-jejunal.

Radiological Findings



Enhanced abdominal CT scan, axial (A, B, C, D) with coronal / sagittal reconstruction (E, F) images showing a necrotic soft tissue mass centred on the pancreatic head, fistulised into the 2ndpart of duodenum (arrow in D, E and F), invading the SMV and encasing the SMA. The rest of the pancreas appears atrophied with dilated pancreatic duct. Note multiple nodules of various size disseminated in both lobes of the liver, indicating metastases.

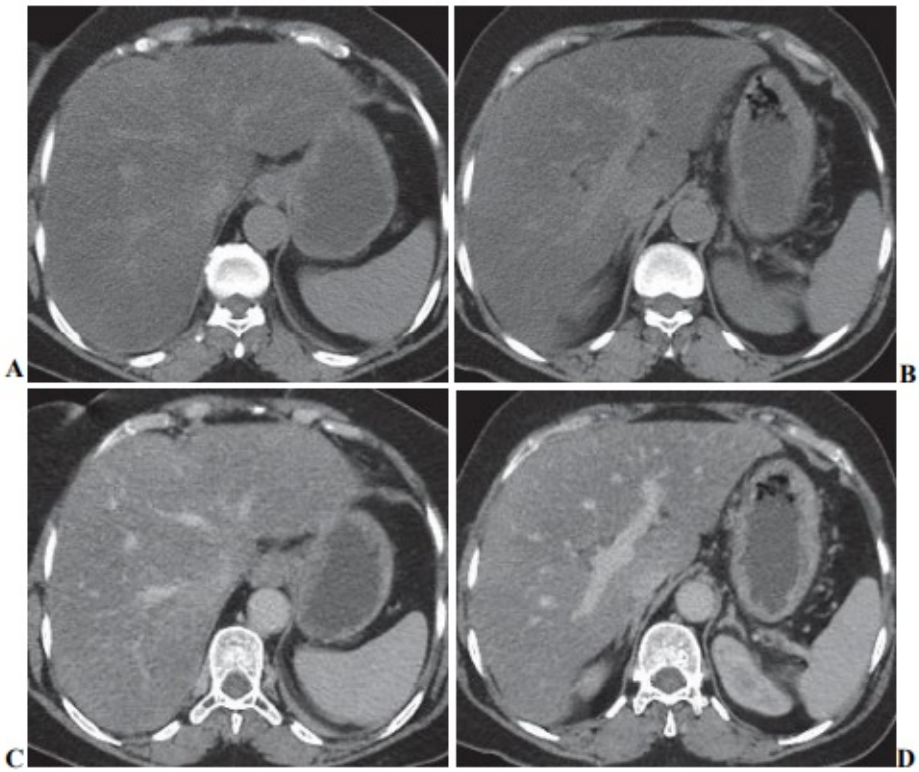
Diagnosis: Necrotic Pancreatic Carcinoma Fistulised into the 2nd Duodenum with Liver Metastases

Case 198

Clinical Presentation

A 64-year-old female diabetic patient with abnormal LFTs.

Radiological Findings



Abdominal CT scan, non-enhanced (A, B) and enhanced delayed (C, D) images showing diffuse decreased attenuation of the liver with spontaneously hyperdense vessels coursing through the fatty infiltration. Note the inversion of the hepato-splenic gradient of density, normally the liver is 8–10 HU more than spleen.

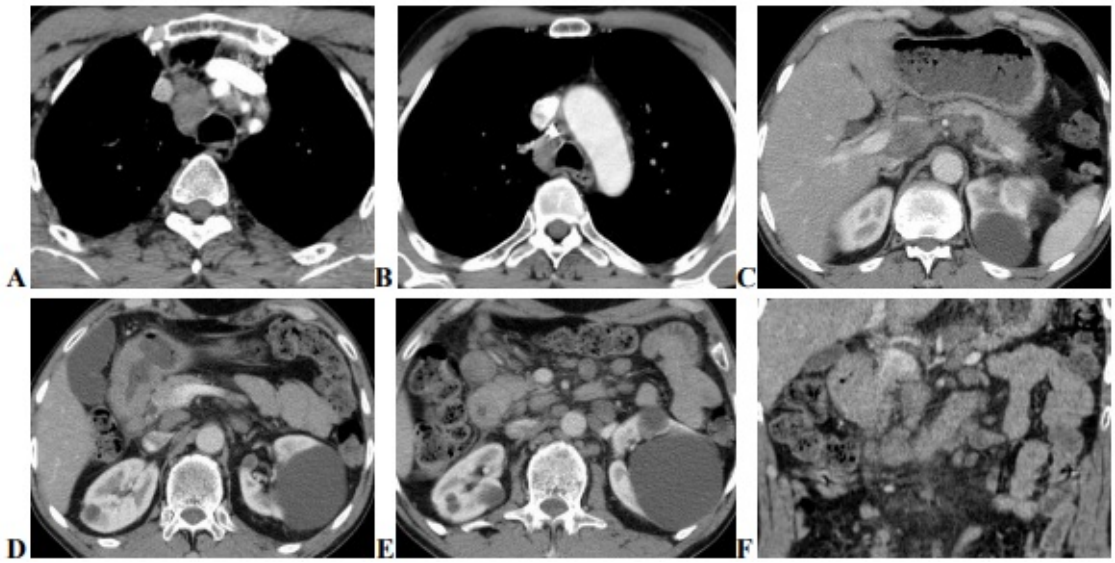
Diagnosis: Hepatic Steatosis

Case 199

Clinical Presentation

A 67-year-old man with 2 years' history of neglected epigastric pain, anorexia and weight loss.

Radiological Findings



Enhanced thoracoabdominal CT scan, axial (A, B, C, D, E) with coronal reconstruction (F) images. Right paratracheal mediastinal lymphadenopathy are shown on images A and B. Circumferential wall thickening of the antro-pyloro-duodenal region with multiple peri-portal, mesenteric and retroperitoneal lymphadenopathy. Note bilateral cortical renal cysts.

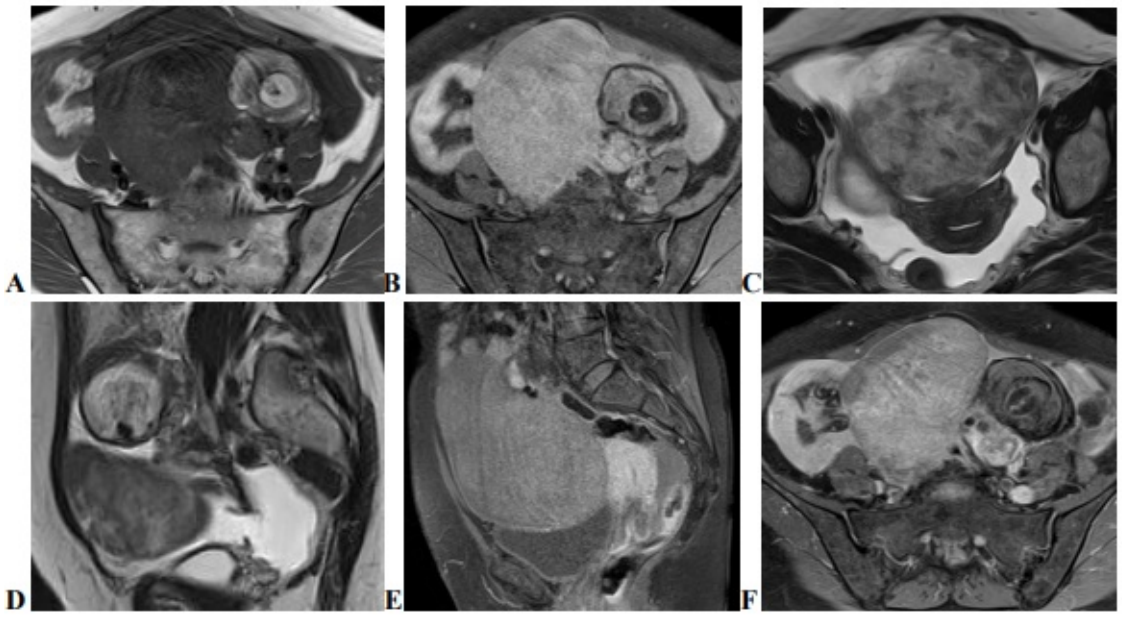
Diagnosis: Lymphoma MALT Type (Mucosa Associated Lymphoid Tissue)

Case 200

Clinical Presentation

A 58-year-old postmenopausal lady presented with 8 months' history of pain in right lower abdomen with anorexia and weight loss. Her pelvic exam revealed a large firm to hard, non-tender, well-defined, mobile mass in right pelvic region arising out of pelvis.

Radiological Findings



MR scan, axial T1 (A), T1 fat saturation (B), axial / sagittal T2 (C, D) and post-contrast sagittal / axial T1 fat saturation (E, F) images showing a large right supra-vesical soft tissue mass of intermediate signal intensity on T1, heterogeneous signal intensity on T2 with moderate inhomogeneous enhancement after gadolinium administration. Another well-encapsulated complex cystic mass is seen in the left pelvic region of complex signal intensity with solid floating nodule (Rokitansky nodule) containing central calcification of low signal on T1 and T2 and fatty component of high signal on T1 and T2 attenuated on fat saturated T1. Note moderate ascites with thickening of the peritoneal reflections (peritoneal carcinomatosis).

Diagnosis: Right Ovarian Carcinoma with Peritoneal Carcinomatosis, Coexisting with Left Ovarian Dermoid Cyst