

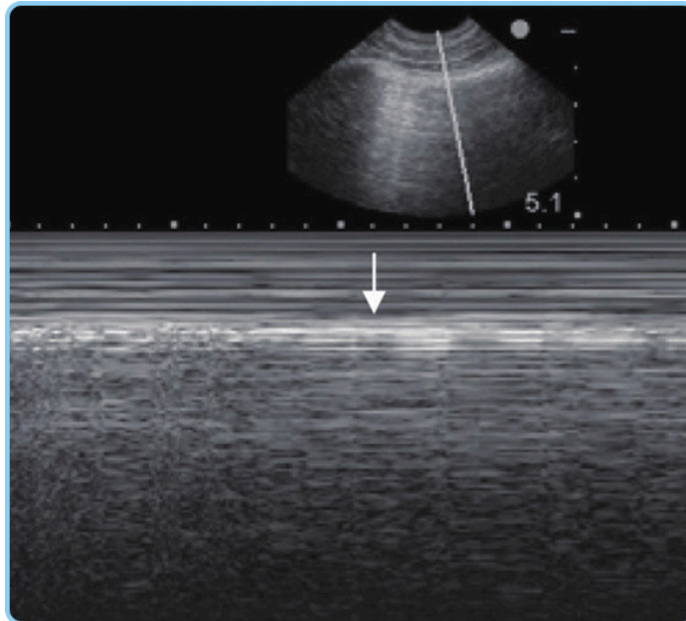
High-yield one-liners in Radiology

1. **Mount Fuji Sign:** Tension pneumocephalus



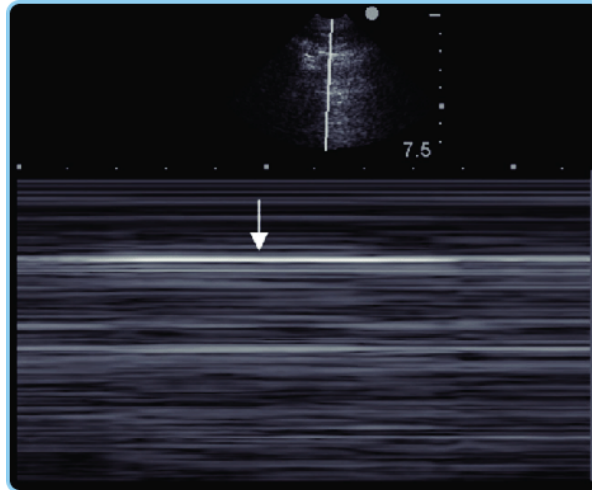
- Tension pneumocephalus is a neurosurgical emergency where subdural air causes a mass effect on the brain, typically due to a ball-valve mechanism allowing one-way entry of air into the subdural space.

2. **Seashore sign:**



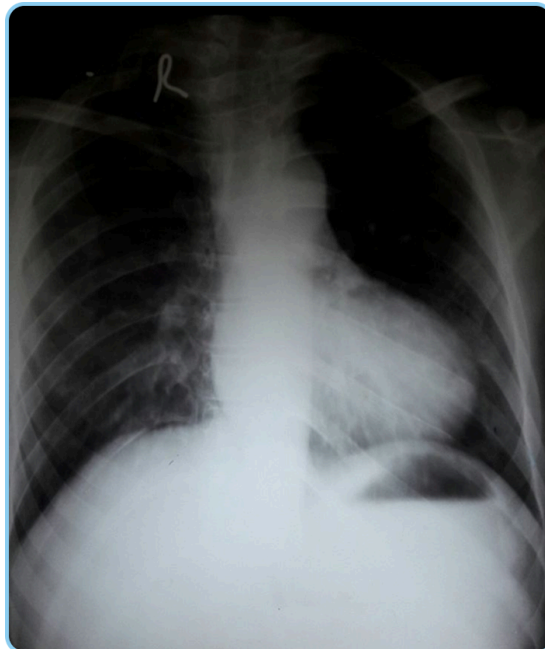
- Seashore sign on M-mode lung ultrasound shows a granular pattern (sand) below a straight pleural line (sea), indicating normal lung sliding and absence of pneumothorax, whereas barcode/stratosphere sign replaces it when lung sliding is absent.

3. **Barcode sign/Stratosphere sign:** Pneumothorax



- Barcode (Stratosphere) sign on M-mode lung ultrasound shows parallel horizontal lines both above and below the pleural line, resembling a barcode, indicating absence of lung sliding and hence suggestive of pneumothorax (unlike the normal seashore sign).

4. **Chest X-Ray showing Boot-shaped Heart:** Tetralogy of Fallot



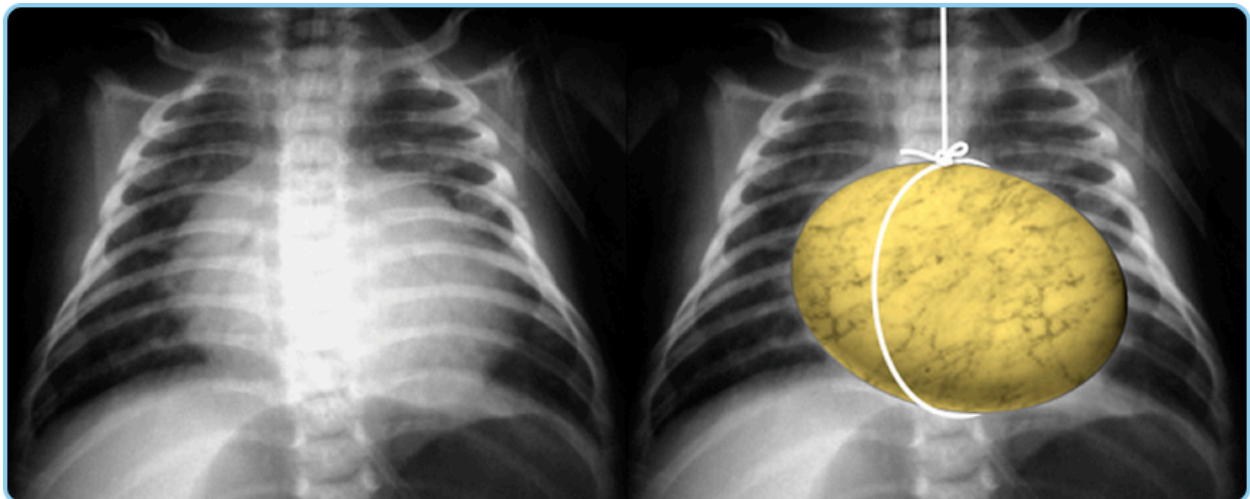
- Boot-shaped heart (Coeur en sabot) on chest X-ray shows an upturned apex and concave pulmonary segment, classically seen in Tetralogy of Fallot due to right ventricular hypertrophy.

5. **Figure of 8 or snowman appearance:** Supracardiac TAPVC



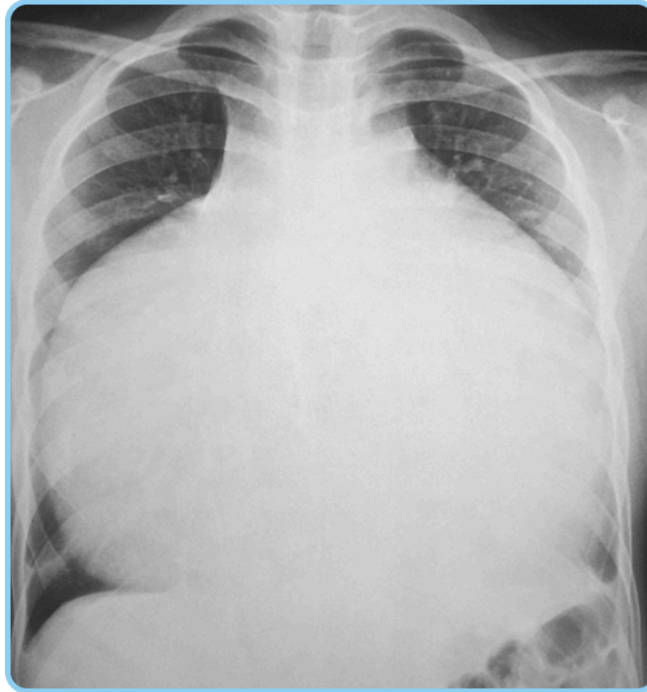
- Figure-of-8 or Snowman appearance on chest X-ray shows a superior mediastinal shadow resembling a snowman and is classically seen in Total Anomalous Pulmonary Venous Connection (TAPVC) – supracardiac type, due to dilated vertical vein and SVC forming the upper “snowman” and enlarged right atrium forming the lower part.

6. **Egg on a string appearance:** Transposition of the Great Arteries (TGA)



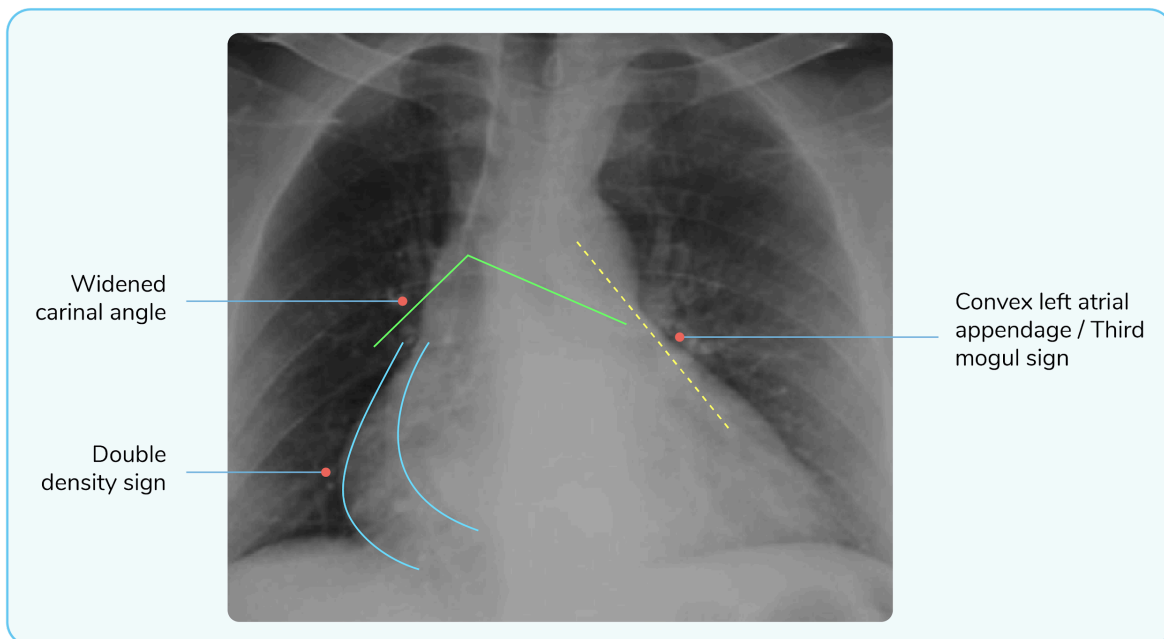
- Egg-on-string appearance on chest X-ray shows a narrow mediastinum with a globular, egg-shaped cardiac silhouette, classically seen in Transposition of the Great Arteries (TGA) due to narrowing of the superior mediastinum from malposition of the great vessels.

7. **Box-shaped heart:** Ebstein Anomaly



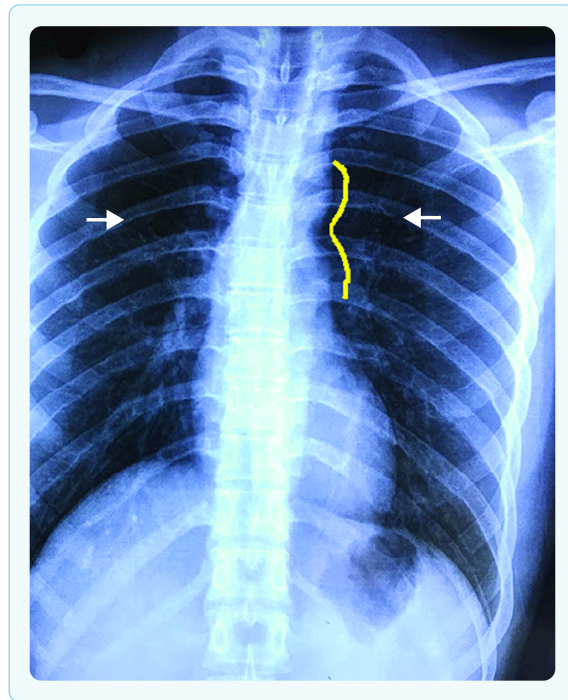
- Box-shaped heart on chest X-ray shows a globular, enlarged right atrium with a squared-off cardiac silhouette, classically seen in Ebstein anomaly, due to the atrialized portion of the right ventricle and downward displacement of the tricuspid valve.

8. **Double density sign:** Left atrial enlargement



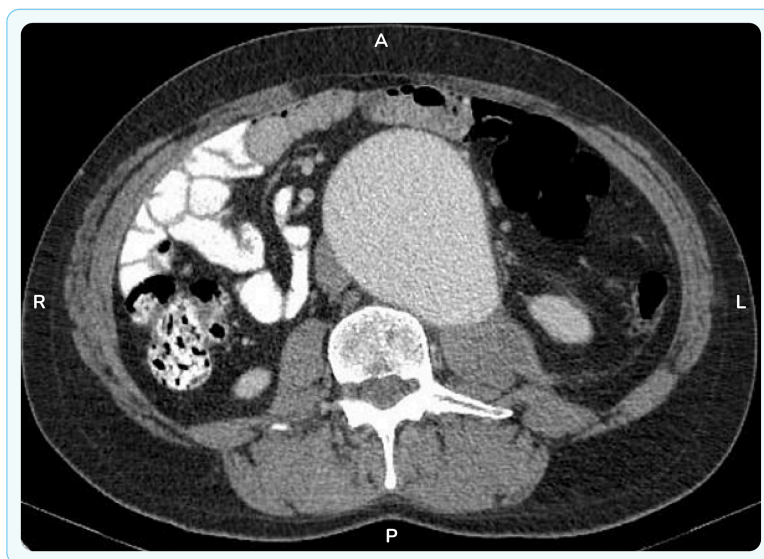
- Left atrial enlargement on chest X-ray shows a double density along the right heart border, splaying of the carina or widened aortopulmonary window, elevated left main bronchus, and straightening or prominence of the left heart border.

9. **Figure of 3 Sign: Coarctation of the Aorta**



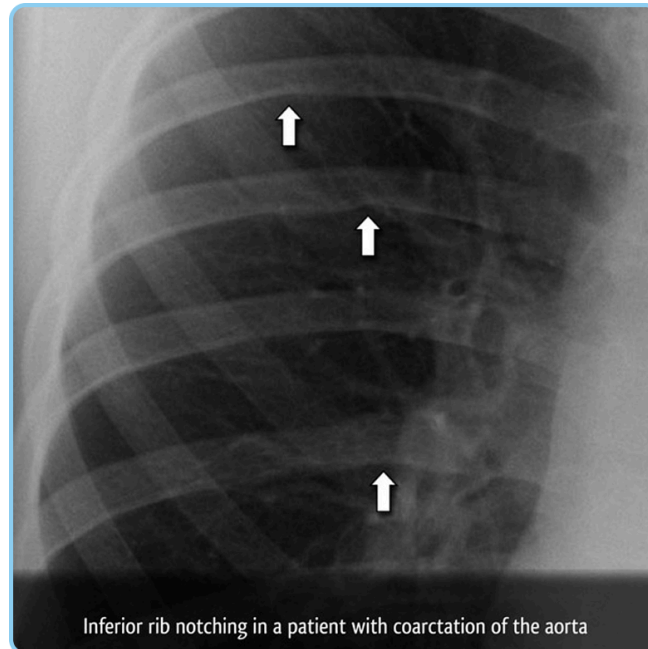
- Figure-of-3 sign on chest X-ray shows a prestenotic dilation of the aortic arch, a narrow aortic isthmus, and post-stenotic dilation of the descending aorta, forming a “3” shape, classically seen in coarctation of the aorta.

10. **Draped Aorta Sign: Aortic Aneurysm**



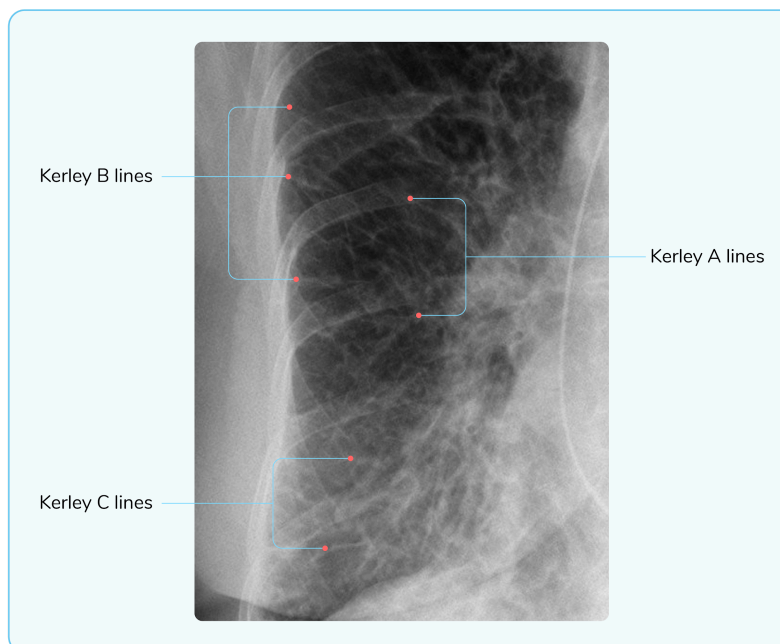
- Draped aorta sign on chest X-ray or CT shows the posterior aortic wall closely following the contour of the vertebra with loss of the normal fat plane, classically seen in contained rupture of a descending thoracic or abdominal aortic aneurysm.

11. **Inferior Rib Notching:** Coarctation of the aorta



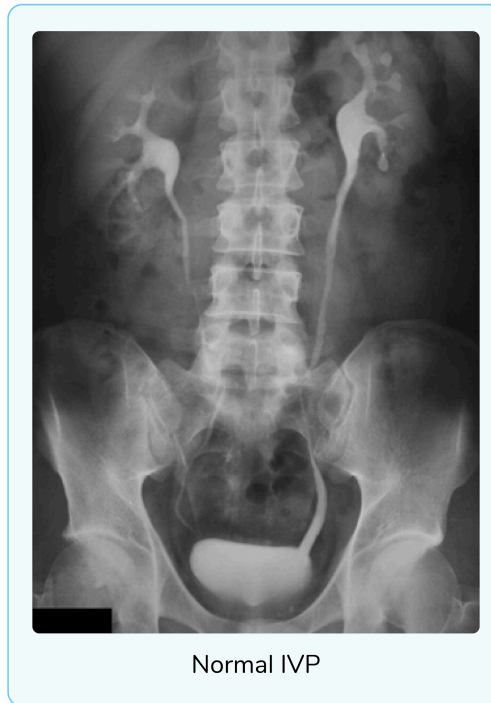
- Inferior rib notching on chest X-ray shows notches along the lower borders of the ribs, classically seen in coarctation of the aorta, due to enlarged intercostal arteries eroding the rib undersurface from collateral circulation.

12. **Kerley Lines:** Interstitial oedema



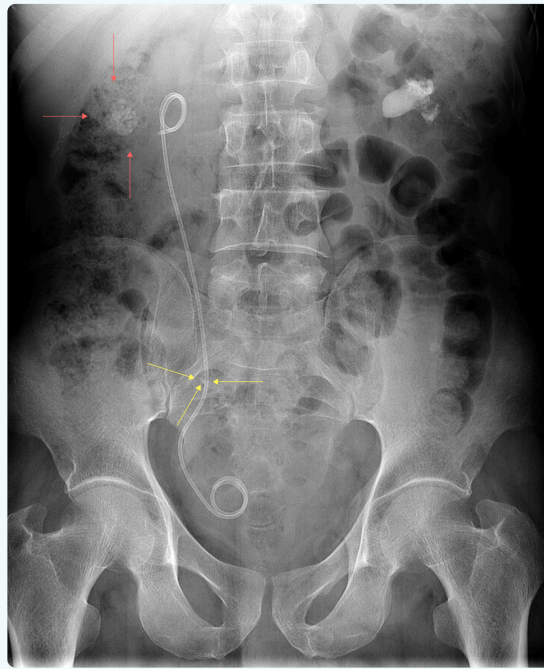
- Kerley lines on chest X-ray are thin linear pulmonary opacities seen in interstitial edema: Kerley A lines – long, unbranching lines radiating from hilar region into lung; Kerley B lines – short, horizontal lines at lung bases, perpendicular to pleura; Kerley C lines – fine, reticular lines throughout the lung periphery.

13. Intravenous Pyelography (IVP):



- It is a diagnostic test involving **intravenous contrast** and X-ray imaging of the urinary tract to evaluate hematuria and renal stone disease and assess follow-up after interventions.

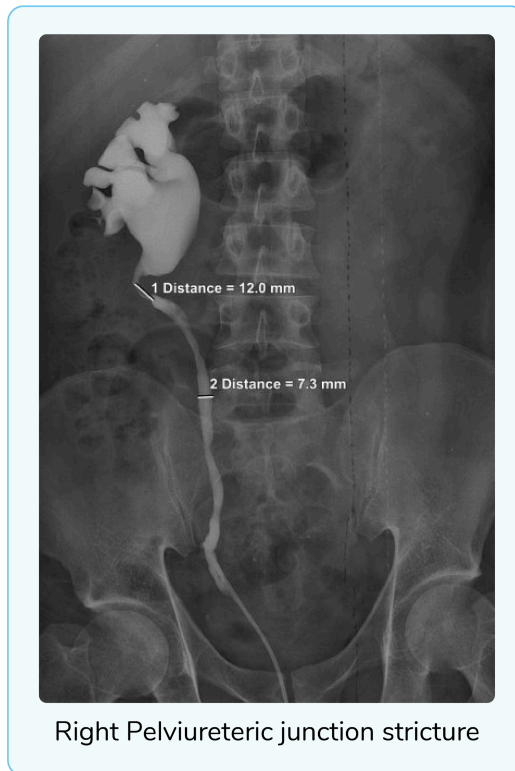
14. Ureteral Stenting (Double J Stent):



X-ray of the abdomen showing nephrolithiasis (red arrow) a double-J catheter (yellow arrow)

- It is a procedure involving the placement of a thin, flexible plastic tube (stent) in the ureter to facilitate urine drainage from the kidney to the bladder in cases of blockage.

15. Retrograde pyelogram:



- Retrograde pyelogram is a procedure that introduces water-soluble contrast retrogradely into the ureter and kidney collecting system under fluoroscopic guidance, done in cases of iatrogenic ureteral injuries, ureteral obstruction, identification of stones or tumours and assistance with stent placement or ureteroscopy.

16. **Drooping lily appearance:** Duplex collecting system



- It is a common congenital renal tract abnormality characterized by incomplete fusion of upper and lower pole moieties, leading to complete or incomplete duplication of the collecting system.

17. **Staghorn calculi:**



X Ray showing right staghorn calculi

- Struvite stones are magnesium ammonium phosphate calculi, classically staghorn-shaped, associated with urease-producing urinary tract infections (e.g., *Proteus*, *Klebsiella*), radiopaque on X-ray, and can lead to rapidly growing, large renal stones causing obstruction and infection.

18. Voiding cystourethrogram showing bilateral vesicoureteral reflux:



Voiding cystourethrogram revealed bilateral vesicoureteral reflux, grade III

- Voiding cystourethrogram (VCUG) showing bilateral vesicoureteral reflux (VUR) demonstrates retrograde flow of contrast from the bladder into both ureters and possibly renal pelvicalyceal systems during voiding, often graded I–V based on extent of ureteral and calyceal dilatation.

19. Cobra neck appearance: Ureterocele



- Cobra neck appearance on imaging (usually IVU or ultrasound) shows a round, contrast-filled outpouching at the distal ureter within the bladder, with a narrow neck resembling a cobra's hood, classically seen in ureterocele.

20. CT showing a central stellate scar: Oncocytoma



- A fibrous, star-shaped scar at the centre of a well-circumscribed renal cortical mass, seen on CT or MRI, is a classic imaging feature distinguishing it from most renal cell carcinomas.

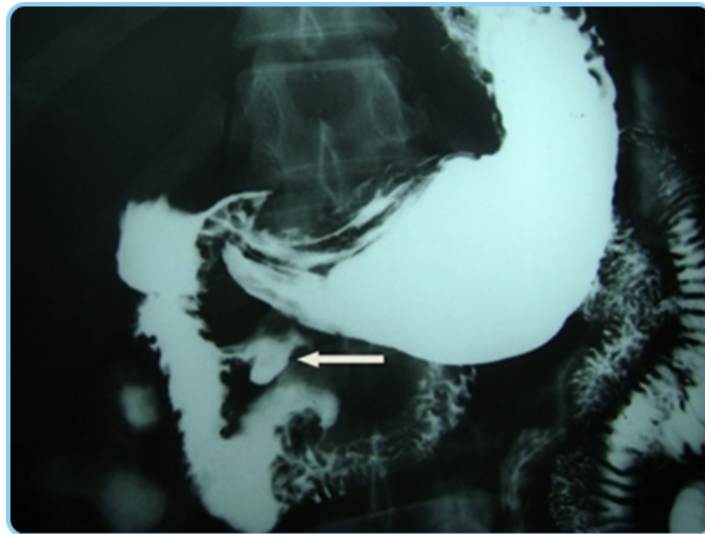
21. Retro-caval ureter:



X-ray Intravenous Pyelogram (IVP) showing medial deviation of the right ureter at L3 level

- A retro-caval ureter is caused by a developmental anomaly in which the ureter is trapped behind the IVC due to improper embryological development of the vena cava, which leads to a characteristic medial deviation of the ureter at the L3-L4 level.

22. Barium meal:



- A barium meal is a radiographic (X-ray) examination of the esophagus, stomach, and duodenum using barium sulfate contrast to assess structural and functional abnormalities.

23. Barium enema:



- Barium enema is a radiologic study of the colon and rectum in which barium sulfate contrast is introduced per rectum to outline the mucosal pattern, lumen, and contour of the large intestine, used to detect strictures, polyps, tumors, diverticula, volvulus, intussusception, or Hirschsprung disease.

24. Barium swallow:



- Barium swallow is a radiologic study of the esophagus in which barium sulfate contrast is ingested orally to visualize the esophageal lumen, motility, and mucosal pattern, used to detect strictures, webs, rings, diverticula, tumors, hiatal hernia, or motility disorders.

25. Barium follow-through:



- Barium follow-through is a radiologic study of the small intestine in which oral barium is ingested and serial X-rays track its passage through the duodenum, jejunum, and ileum, used to detect strictures, obstruction, Crohn's disease, malrotation, or tumors.

26. **Invertogram:** Anal atresia



- Invertogram is a radiographic study performed with the infant held upside down (inverted) to visualize air in the distal rectum, used to diagnose anorectal malformations (imperforate anus) and determine the level of the rectal pouch.

27. Air under the diaphragm: Pneumoperitoneum



- Air under the diaphragm on an upright chest or abdominal X-ray shows free intraperitoneal gas accumulating beneath the diaphragm, classically seen in pneumoperitoneum, most commonly due to a perforated peptic ulcer or perforated hollow viscus.

28. Rigler's sign: Pneumoperitoneum



- Both sides of the bowel wall are visible due to free air outlining it.

29. Falciform ligament sign: Pneumoperitoneum



- The falciform ligament sign, also called the Silver sign, is characterised by the falciform ligament being outlined with free abdominal gas in cases of pneumoperitoneum.

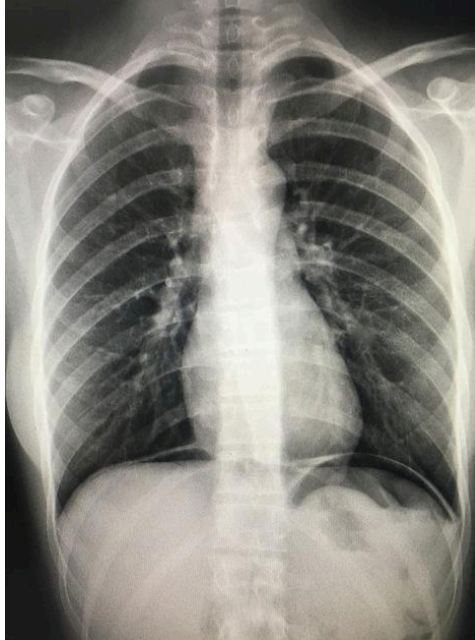
30. **Football sign:** Pneumoperitoneum



Football Sign

- A large oval collection of free air outlining the peritoneal cavity, often in neonates.

31. **Cupola sign:** Pneumoperitoneum



- Air beneath the central tendon of the diaphragm on supine film.

32. **Zenker's diverticulum:**



- Zenker's diverticulum is a posterior outpouching of the hypopharyngeal mucosa through Killian's dehiscence (between the inferior pharyngeal constrictor and cricopharyngeus muscles), usually seen in elderly males, presenting with dysphagia, regurgitation of undigested food, halitosis, and neck mass, and diagnosed on barium swallow showing a posterior pharyngeal pouch above the esophagus.

33. **Bird beak sign:** Achalasia cardia



- Bird beak sign on imaging (barium swallow or contrast study) shows a tapered, smooth narrowing of the distal oesophagus with proximal dilation, classically seen in achalasia due to failure of lower oesophageal sphincter relaxation and loss of oesophageal peristalsis.

34. **Rat tail sign:** Carcinoma oesophagus



- Irregular narrowing of the oesophagus on barium swallow.

35. **Apple core appearance:** Colorectal carcinoma



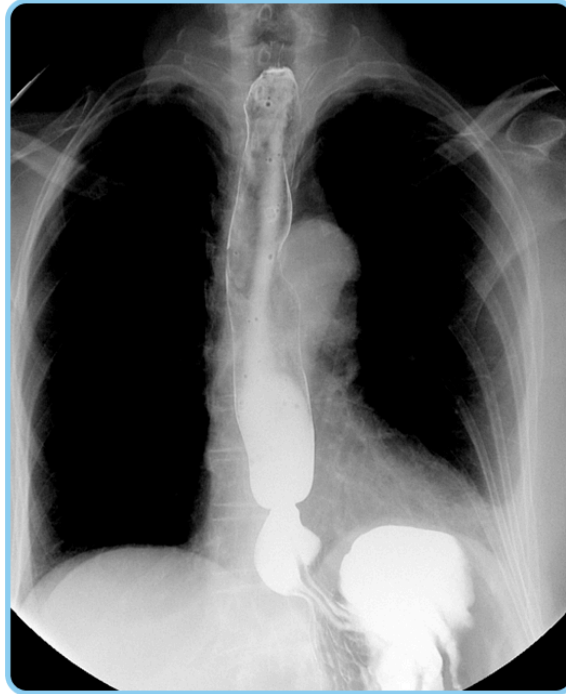
- Apple core sign on barium enema shows a concentric, short-segment, annular constriction of the colon with shouldered edges, classically seen in colorectal carcinoma, indicating luminal narrowing due to an obstructing neoplasm.

36. **Corkscrew oesophagus:** Diffuse oesophageal spasm (DES)



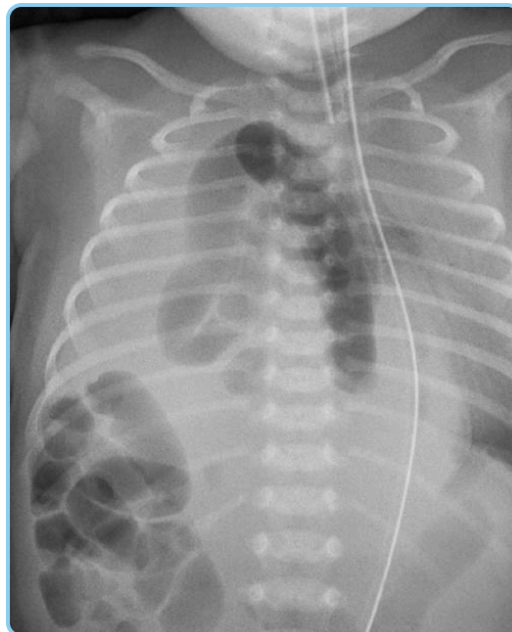
- Corkscrew oesophagus on barium swallow shows multiple, spiral, non-peristaltic contractions of the distal oesophagus, classically seen in diffuse oesophageal spasm (DES), causing intermittent dysphagia and chest pain.

36. **Schatzki Ring:** Hiatus hernia



- Schatzki ring on barium swallow shows a thin, circumferential, smooth narrowing of the distal oesophagus at the squamocolumnar junction, classically associated with intermittent dysphagia for solids and sliding hiatal hernia.

37. X-ray appearance in Congenital Diaphragmatic Hernia:



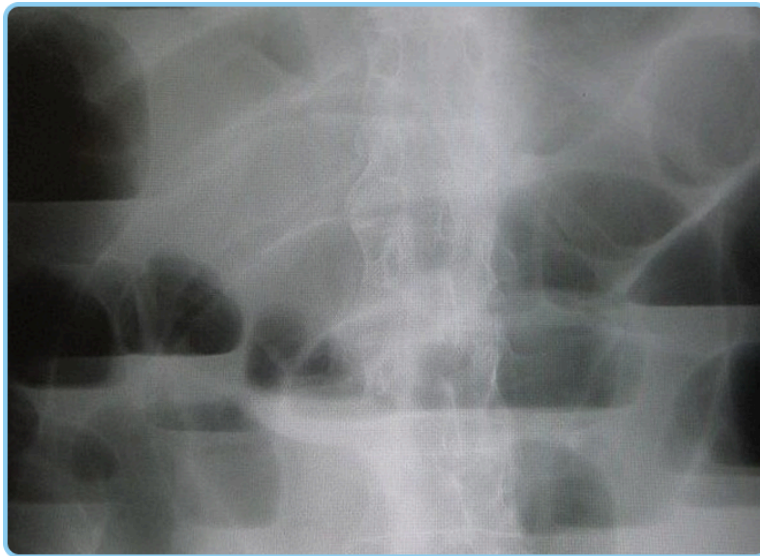
- X-ray in congenital diaphragmatic hernia shows bowel loops or stomach in the thoracic cavity, mediastinal shift to the opposite side, elevated or absent hemidiaphragm, and reduced lung markings on the affected side.

38. Double Bubble Sign: Duodenal Atresia



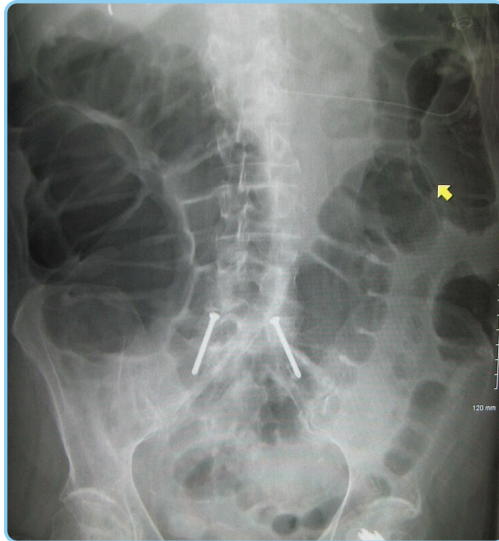
- Double bubble sign on abdominal X-ray shows two adjacent, rounded gas shadows in the upper abdomen - representing the dilated stomach and proximal duodenum - classically seen in duodenal atresia.

39. X-ray features in Small Bowel Obstruction:



- X-ray features of small bowel obstruction include centrally located dilated small bowel loops with visible valvulae conniventes, multiple air-fluid levels in a step-ladder pattern, distal bowel collapse, and occasionally the string-of-pearls sign.

40. X-ray features in Large Bowel Obstruction:



- X-ray features of large bowel obstruction include peripherally located dilated haustrated bowel loops, broad air-fluid levels, distal collapse, and cecal ballooning in distal obstructions.

41. **Coffee Bean Sign:** Sigmoid volvulus



- Coffee-bean sign on abdominal X-ray shows a large, dilated loop of bowel with a central cleft and two limbs resembling a coffee bean, classically seen in sigmoid volvulus, often associated with air-fluid levels and an inverted U-shaped dilated colon.

42. **Target sign (doughnut sign):** Intussusception



- Doughnut sign on ultrasound shows a target-like, concentric, hypoechoic and hyperechoic rings on transverse view of the bowel, classically seen in intussusception, representing the telescoped bowel loops.

43. **Toxic Megacolon:** Ulcerative Colitis



Toxic Megacolon in Ulcerative Colitis

- Toxic megacolon in ulcerative colitis on X-ray shows marked colonic dilation (>6 cm), loss of haustration, thin colonic wall, and often air-fluid levels, with possible pneumatosis or free air if perforation occurs, indicating a life-threatening complication.

44. **Leadpipe Appearance of colon:** Ulcerative Colitis



Leadpipe appearance in Ulcerative colitis (Arrows)

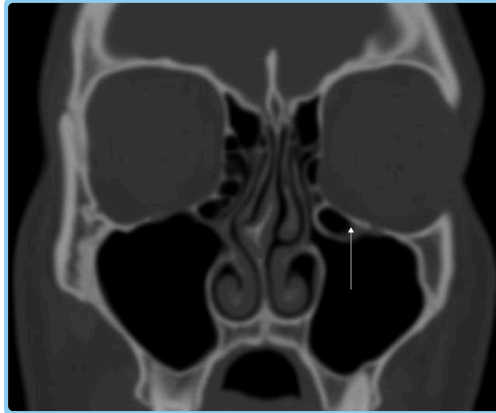
- Lead-pipe appearance on barium enema or colon X-ray shows a smooth, featureless colon with loss of haustral markings, classically seen in chronic ulcerative colitis due to long-standing mucosal inflammation and fibrosis.

45. **String sign of Kantor:** Crohn's disease



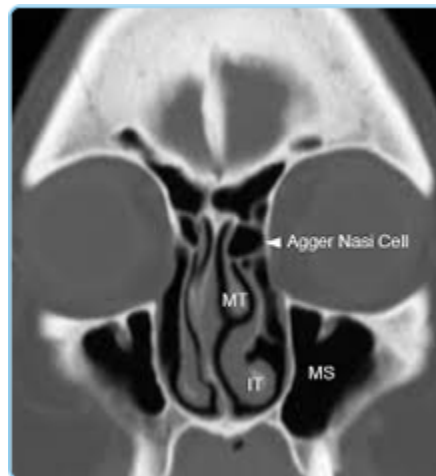
- A beaded, string-like appearance of the bowel due to multifocal narrowing from strictures.

46. **Haller cell:** Ethmoidal air cells



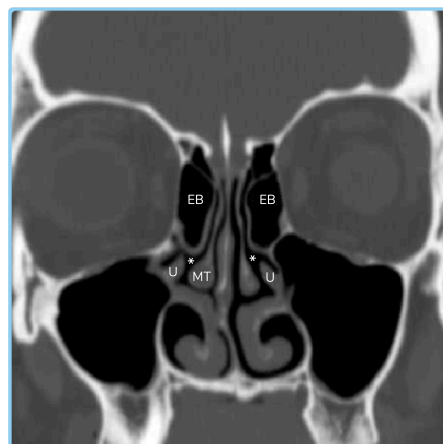
- Infraorbital ethmoid air cell, present along the floor of the orbit, lateral to the lamina papyracea; Manipulation of Haller cells carries the risk of orbital injury.

47. **Agger Nasi:** Ethmoidal air cells



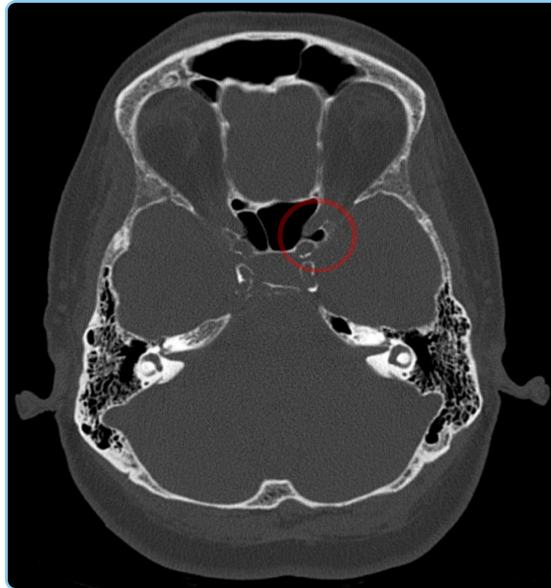
- The anterior-most air cell of the ethmoid sinus, seen within the Lacrimal bone in the medial side of the orbit, anterolateral and inferior to the frontal recess, can contribute to chronic frontal sinusitis.

48. **Bulla ethmoidalis:**



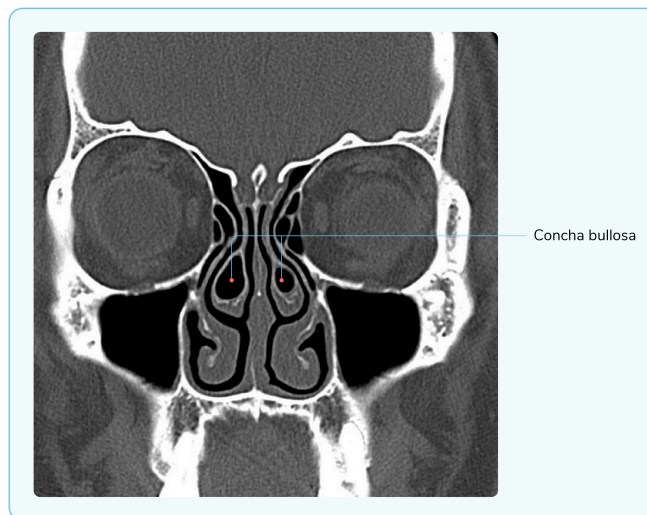
- Also known as the ethmoid bulla, the most consistent and largest ethmoid air cell, located in relation to the uncinate process and lamina papyracea; Risk of orbital injury during endoscopic surgery if the bulla is small.

49. **Onodi cell:** Ethmoidal air cells



- Also known as the spheno-ethmoidal air cell, superior and lateral to the sphenoid sinus, best visualised on coronal CT; Risk of injury to the Optic nerve and Internal carotid artery during endoscopic surgery due to its proximity.

50. **Concha bullosa:**



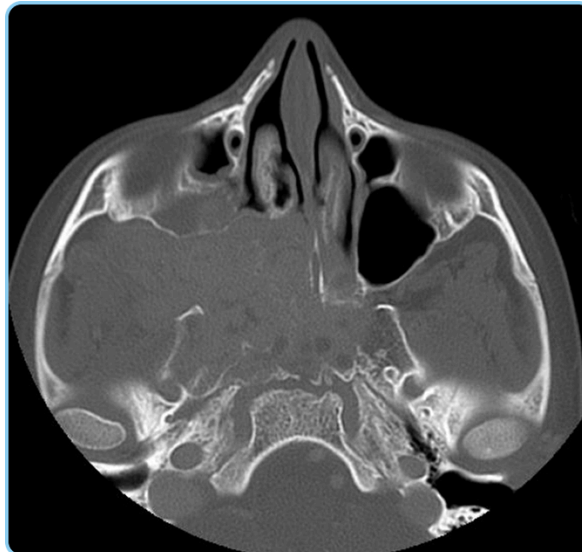
- Concha bullosa is a pneumatized (air-filled) middle nasal turbinate, commonly seen on CT paranasal sinuses, which may contribute to nasal obstruction, sinusitis, or deviation of the nasal septum.

51. **Empty Delta sign:** Sinus thrombosis



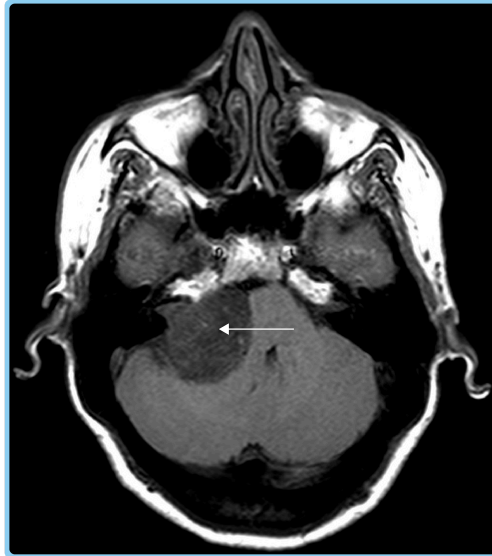
- An empty delta sign on contrast-enhanced CT or MR venography shows a triangular filling defect within the dural venous sinus (usually superior sagittal sinus) surrounded by contrast, classically seen in cerebral venous sinus thrombosis (CVST).

52. **Holman-Miller sign:** Juvenile Nasopharyngeal Angiofibroma



- Also known as the Antral sign: Anterior bowing of the posterior wall of the maxillary sinus.

53. **Ice cream cone appearance:** CP angle tumor



- A vestibular schwannoma (acoustic neuroma) extending from the internal auditory canal into the CPA, where the “cone” is the widened internal auditory canal and the “ice cream” is the extruding CPA mass, best seen on contrast-enhanced MRI.

54. Coin in Oesophagus:



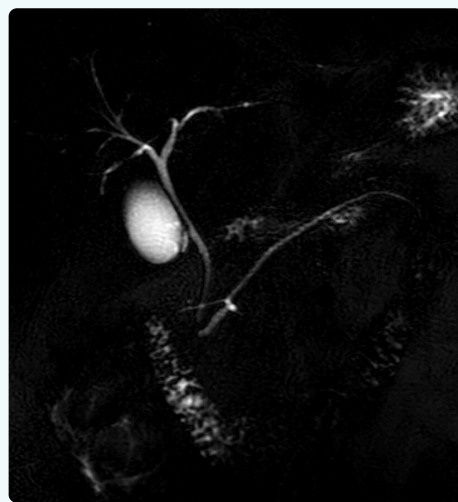
- A coin in the oesophagus is identified by a circular-shaped opacity seen on AP view and appears slit-like on lateral view.

55. Coin in Trachea:



- Slit-like on the AP view and Circular opacity on the lateral view.

56. **Magnetic Resonance Cholangiopancreatography (MRCP):**



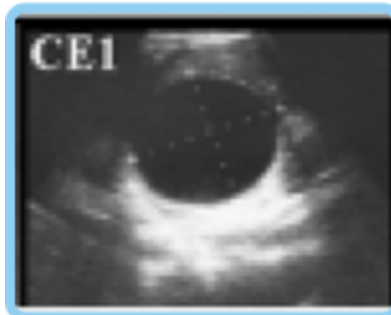
- MRCP (Magnetic Resonance Cholangiopancreatography) is a non-invasive MRI technique that visualizes the biliary and pancreatic ducts using heavily T2-weighted sequences, allowing detection of stones, strictures, tumors, or ductal anomalies without contrast injection.

57. **Endoscopic Retrograde Cholangiopancreatography (ERCP):**



- ERCP (Endoscopic Retrograde Cholangiopancreatography) is an invasive procedure combining endoscopy and fluoroscopy to visualize and intervene in the biliary and pancreatic ducts, allowing diagnosis and treatment of stones, strictures, leaks, and tumors via contrast injection into the ducts through a duodenoscope.

58. **CE1:** Hydatid Cyst (WHO Classification)



- Unilocular anechoic lesion with a 'double line' sign; Active stage; Gharbi Type I

59. **CE2:** Hydatid Cyst (WHO Classification)



- Cyst with multiple septations, resembling a honeycomb; Active stage; Gharbi Type III

60. **CE3a:** Hydatid Cyst (WHO Classification)



- Unilocular cyst with detached membranes and 'water-lily' sign; Transitional stage; Gharbi Type II

61. **CE3b:** Hydatid Cyst (WHO Classification)



- A cyst with daughter cysts in a solid matrix; Transitional stage; Gharbi Type III

62. **CE4:** Hydatid Cyst (WHO Classification)



- Heterogeneous echogenicity, no daughter cysts indicating degeneration; Inactive stage; Gharbi Type IV

63. **CE5:** Hydatid Cyst (WHO Classification)



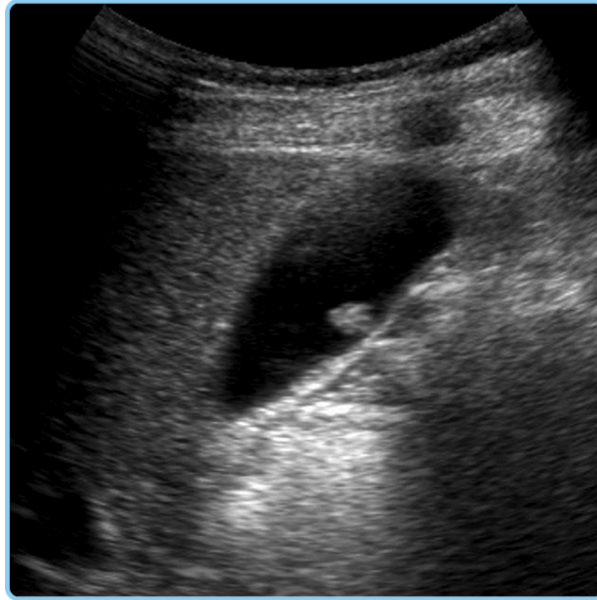
- Calcified cyst showing inactivity; Inactive stage; Gharbi Type V

64. **Mercedes-Benz sign:** Cholelithiasis



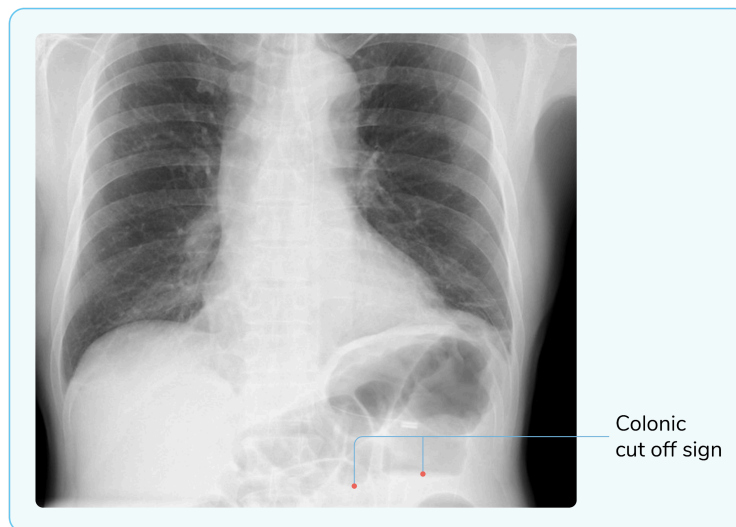
- Mercedes-Benz sign on imaging shows gas-filled fissures within a gallstone forming a three-pointed star, classically seen in cholesterol gallstones on plain radiographs, CT, or ultrasound.

65. **Gallbladder polyp:**



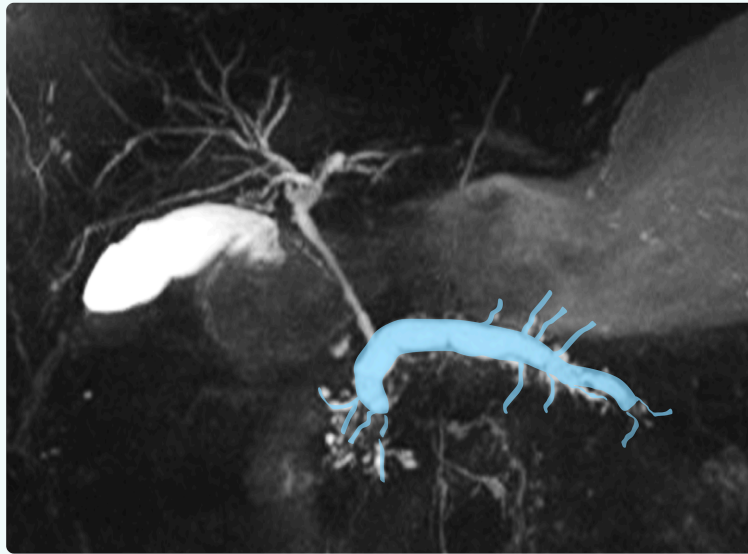
- A gallbladder polyp is a focal, sessile or pedunculated lesion projecting from the gallbladder wall into its lumen, usually detected incidentally on ultrasound, with a size >1 cm, rapid growth, or associated gallstones suggesting a higher risk of malignancy.

66. **Colon cut-off sign:** Acute pancreatitis



- Colon cut-off sign on abdominal X-ray shows an abrupt termination of gas in the colon at the splenic flexure, classically seen in acute pancreatitis, due to reflex spasm of the colon from adjacent pancreatic inflammation.

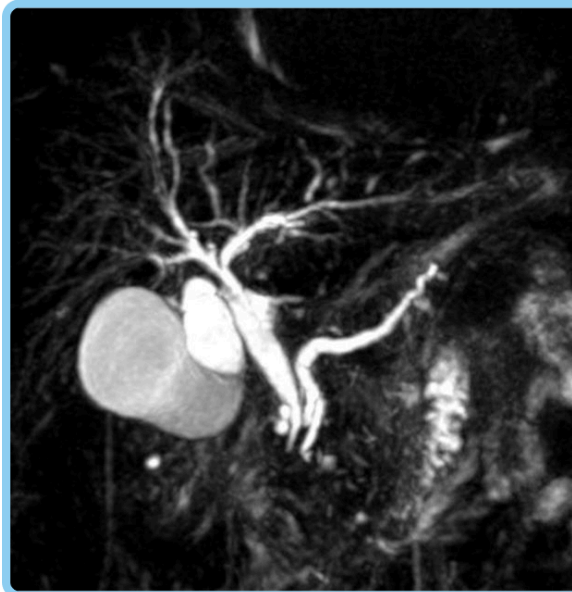
67. **MRCP- Chain of lakes:** Chronic pancreatitis



Chronic pancreatitis
Chain of lakes sign

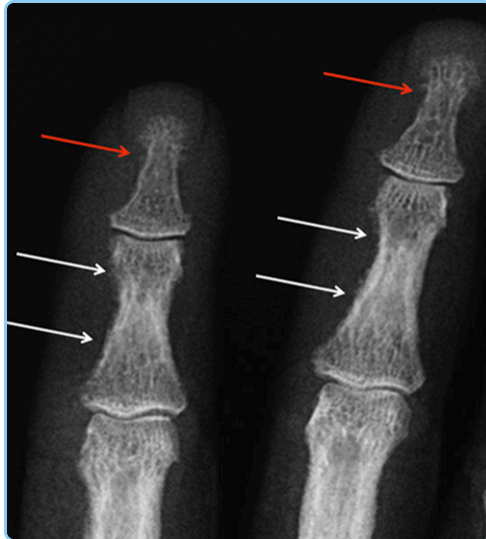
- The chain of lakes appearance on MRCP shows multiple alternating dilations and strictures of the pancreatic duct, classically seen in chronic pancreatitis, reflecting segmental fibrosis and ductal irregularity.

68. **MRCP showing double duct sign:** Periampullary carcinoma



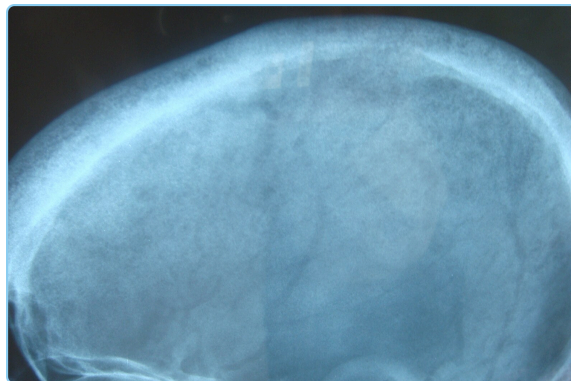
- Double duct sign on MRCP shows simultaneous dilatation of the common bile duct and the main pancreatic duct, classically seen in pancreatic head carcinoma or ampullary carcinoma, indicating obstruction at the level of the pancreatic head or ampulla.

69. **X-ray of hand showing subperiosteal resorption:** Hyperparathyroidism



- Subperiosteal resorption of the hand on X-ray shows irregular, lace-like resorption of the radial aspects of the middle phalanges, classically seen in primary hyperparathyroidism, reflecting osteoclastic bone activity due to elevated parathyroid hormone.

70. **Salt and pepper appearance of the skull:** Hyperparathyroidism



- A radiographic finding characterized by multiple tiny well-defined lucencies in the calvaria resulting from trabecular bone resorption in hyperparathyroidism.

71. **Brown tumors:** Hyperparathyroidism



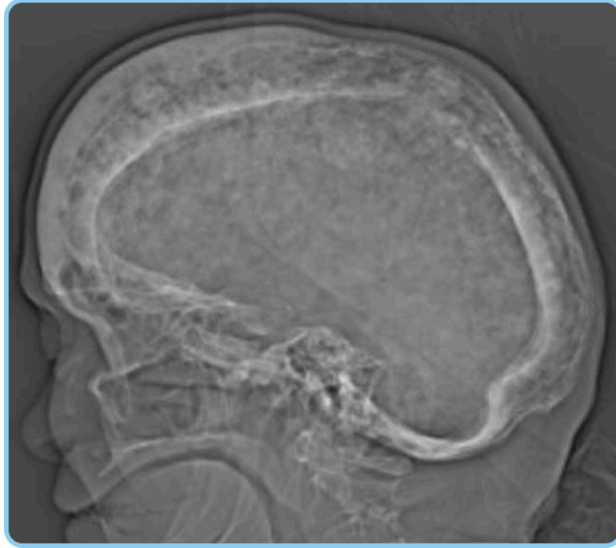
- A non-neoplastic reparative cellular process occurring in hyperparathyroidism, also known as osteitis fibrosa cystica or osteoclastoma; Brown coloration derives from hemosiderin deposits, histologically identical to giant cell tumours, leading to potential misdiagnosis if calcium/PTH levels aren't evaluated.

72. Hair on-end (or crew cut) appearance: Hemolytic anemias



- Hair-on-end (crew-cut) appearance on skull X-ray shows perpendicular spicules of new bone projecting from the outer table of the skull, classically seen in thalassemia major, sickle cell anemia, and other chronic hemolytic anemias due to marrow hyperplasia from increased erythropoiesis.

73. Tam O'Shanter sign:



- Tam O'Shanter sign on skull X-ray shows thickened, sclerotic, and widened cranial vault with a bossed forehead, classically seen in fibrous dysplasia of the skull, named because the skull shape resembles the Scottish Tam O'Shanter hat.

74. Opera glass hand deformity: Psoriatic arthritis



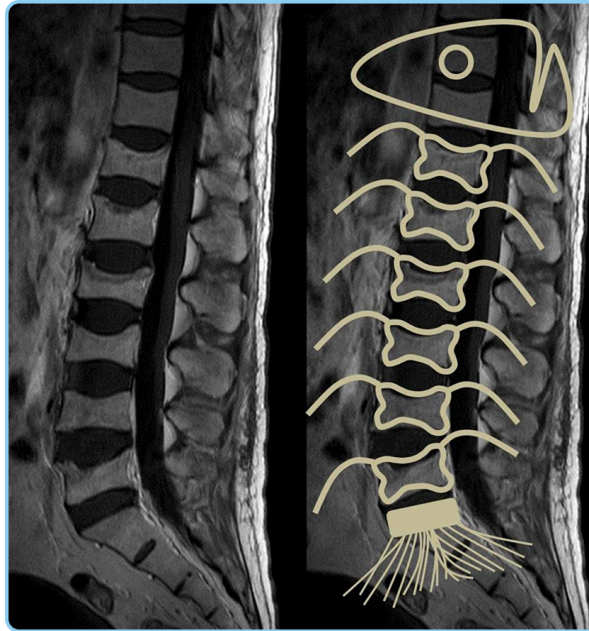
- Opera-glass hand, originally described in French as "la main en lorgnette," is a finding in arthritis mutilans characterized by telescoping fingers with normal overlying skin becoming redundant, forming transverse folds similar to opera glass or telescoping binoculars.

75. Tuberculous dactylitis/spina ventosa: TB



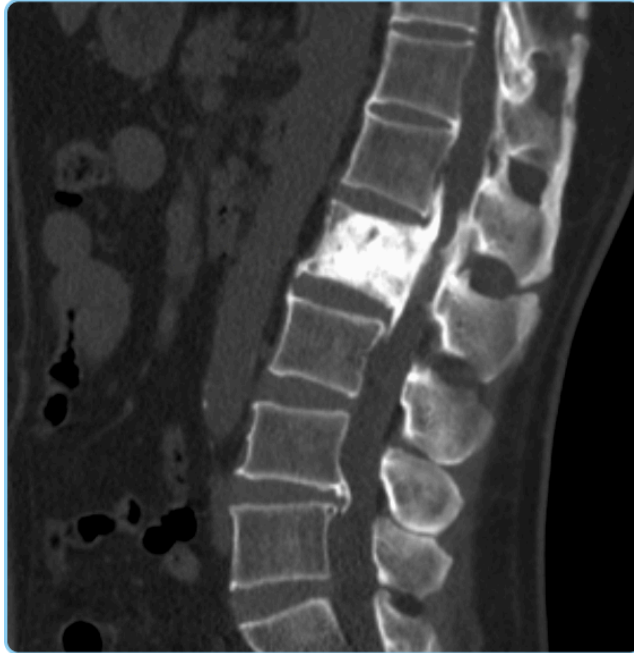
- A rare skeletal manifestation of tuberculosis affecting the short tubular bones (phalanges, metacarpals, metatarsals).

76. **Codfish or fish-mouth vertebrae:** Osteoporosis



- Codfish vertebra (also called Fish-mouth vertebra) refers to a biconcave deformity of the vertebral body, where both the superior and inferior endplates are concave, giving the vertebra a fish-mouth or codfish appearance on lateral X-ray of the spine, which is seen in osteoporosis, osteomalacia, sickle cell anemia, thalassemia, Cushing's syndrome and renal osteodystrophy.

77. **Ivory vertebra:**



- Ivory vertebra is a single, uniformly sclerotic vertebral body seen in Hodgkin's lymphoma, osteoblastic metastasis (prostate/breast), or Paget's disease.

78. **Picture frame vertebra:** Paget's disease



- Picture frame vertebra refers to a vertebral body with dense sclerotic margins (cortex) and a relatively radiolucent center due to cortical thickening and sclerosis of vertebral margins with osteoporosis of the central portion, giving the appearance of a framed picture on X-ray.

79. **Blade of grass sign (candle flame appearance):** Lytic phase Paget disease of bone



- Blade of grass sign (or candle flame appearance) refers to a well-defined advancing V-shaped or flame-shaped lytic area seen in the long bones during the lytic (early) phase of Paget's disease of bone.

80. **Trident hand:** Achondroplasia



- Trident fingers in achondroplasia refer to the appearance of the hand where the middle and ring fingers are slightly separated, creating a “trident” or three-pronged look due to shortening of the proximal and middle phalanges with relatively preserved spacing between the middle and ring fingers.

81. **Champagne glass pelvis:** Achondroplasia



- Champagne glass pelvis refers to a pelvic shape seen in achondroplasia, where the iliac wings are short and flared, and the sacrospinous notch is narrow, giving the pelvis a wide top and narrow bottom resembling a champagne glass.

82. Dystrophic calcinosis cutis: CREST syndrome



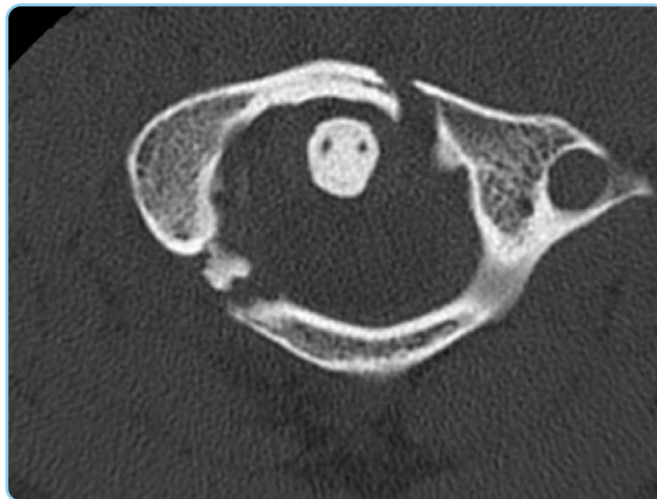
- These are subcutaneous firm yellow-white nodules, most frequently involving extremities (hands, fingers, feet) and represent deposition of insoluble calcium salts in cutaneous and subcutaneous tissue despite normal serum calcium and phosphorus levels.

83. Codman triangle: Osteosarcoma



- It represents an interrupted periosteal reaction due to aggressive bone lesions lifting the periosteum, caused by aggressive tumours such as osteosarcoma, infection, trauma, or haemorrhage.

84. Jefferson burst fracture:



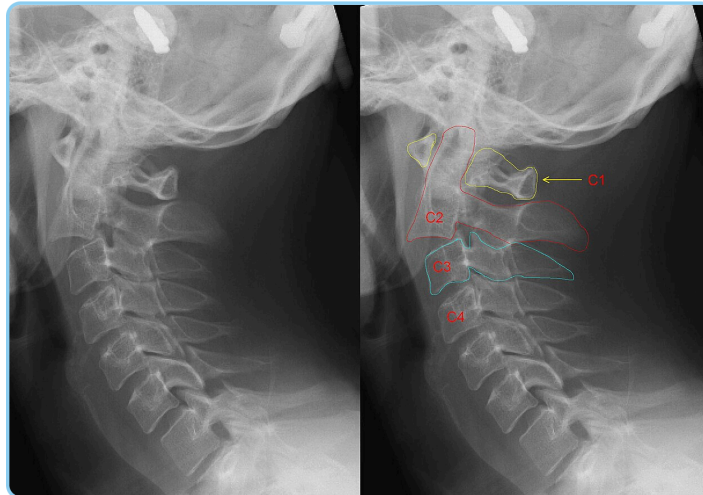
- Jefferson fracture is a burst fracture of C1 involving the anterior and posterior arches due to axial loading, often assessed by lateral mass displacement.

85. Chance fracture: Seatbelt injury



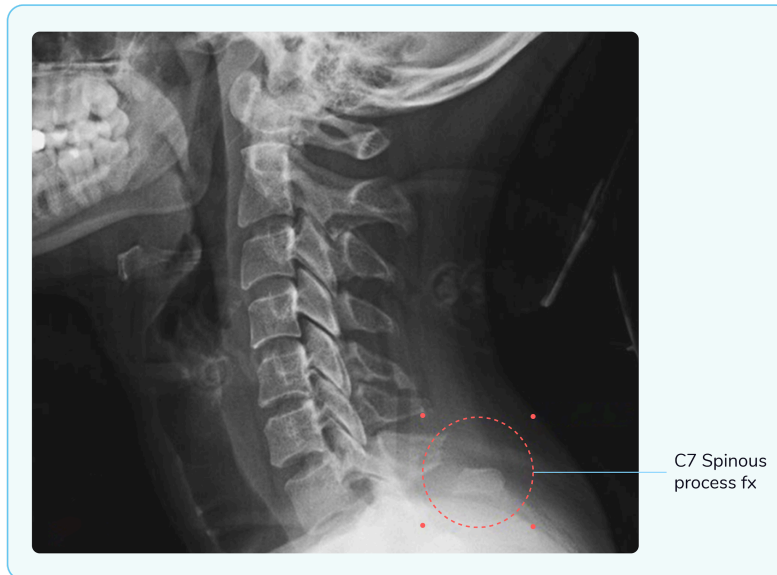
- A Chance fracture is an unstable, flexion-distraction injury of the spine, typically at the thoracolumbar junction, with a horizontal fracture through the spinous process, pedicles, and vertebral body.

86. Hangman's fracture:



- Hangman's fracture is a fracture of the pars interarticularis of the C2 vertebra (axis), typically caused by hyperextension and axial loading of the cervical spine.

87. Clay shoveller's fracture:



- Clay-shoveler's fracture is a stable avulsion fracture of the C7 (or lower cervical) spinous process caused by sudden muscle contraction or direct trauma.

88. Extradural Haemorrhage:



- Extradural haemorrhage is a biconvex collection of blood between the skull and dura, usually arterial, commonly from middle meningeal artery injury after trauma, with "lucid interval" followed by rapid deterioration, often requiring surgical evacuation if large or symptomatic.

89. Subdural Haemorrhage:



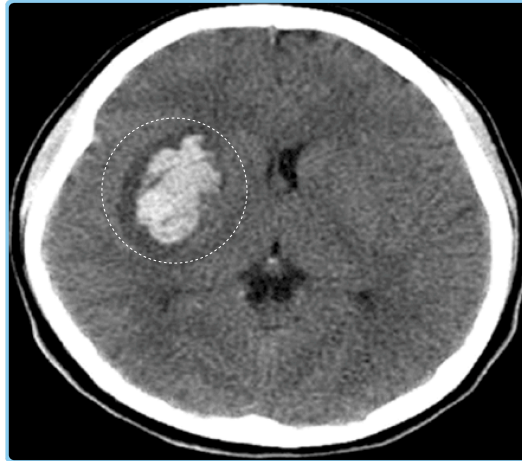
- Subdural hemorrhage is a crescent-shaped collection of blood between the dura and arachnoid, usually from torn bridging veins, crossing suture lines, and presenting with a gradual onset of headache, confusion, or focal neurological deficits.

90. **Subarachnoid hemorrhage:**



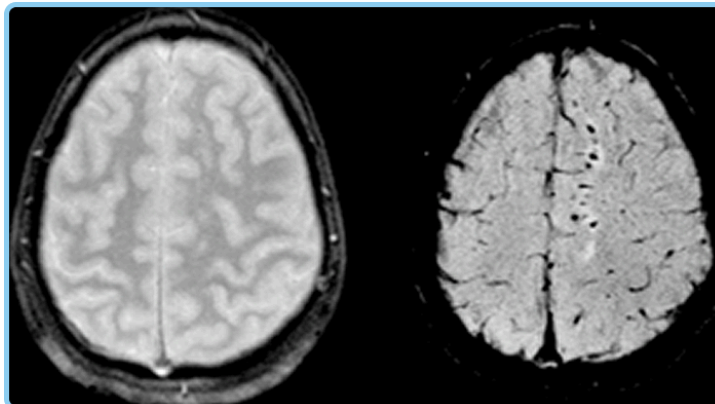
- Subarachnoid haemorrhage (SAH) is bleeding into the subarachnoid space between the arachnoid and pia mater, where cerebrospinal fluid circulates, usually due to rupture of a saccular (berry) aneurysm, presenting as sudden “thunderclap” headache, neck stiffness, photophobia, nausea, and loss of consciousness; Lumbar puncture shows xanthochromia; treated by surgical clipping or endovascular coiling.

91. **Lenticulostriate artery stroke:**



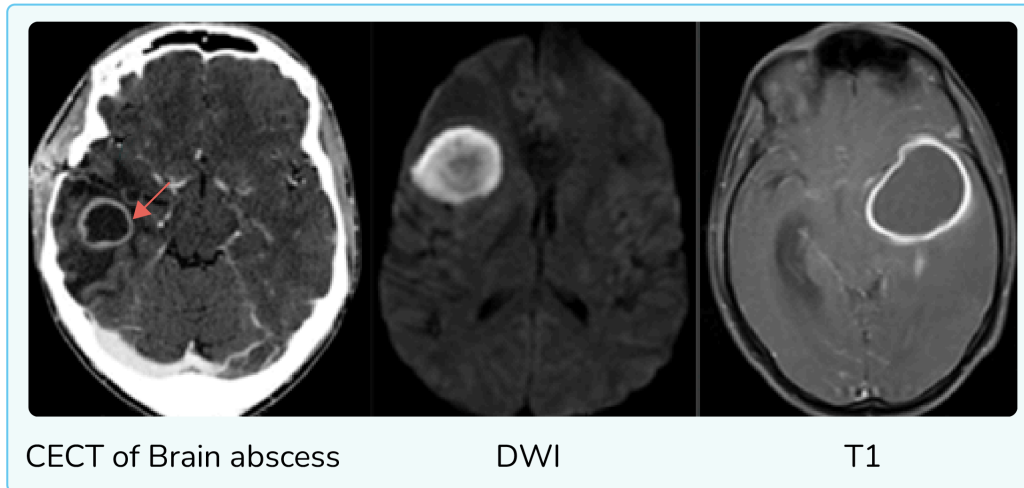
- It refers to an ischemic infarct in the basal ganglia region supplied by the lenticulostriate arteries, which are small perforating branches of the middle cerebral artery (MCA), most commonly affecting the putamen, globus pallidus, and sometimes internal capsule, due to hypertensive small vessel disease, presenting as contralateral hemiparesis (especially face and arm), contralateral sensory loss (if internal capsule involved) or pure motor or sensorimotor hemiplegia in lacunar infarcts.

92. **Diffuse axonal injury:**



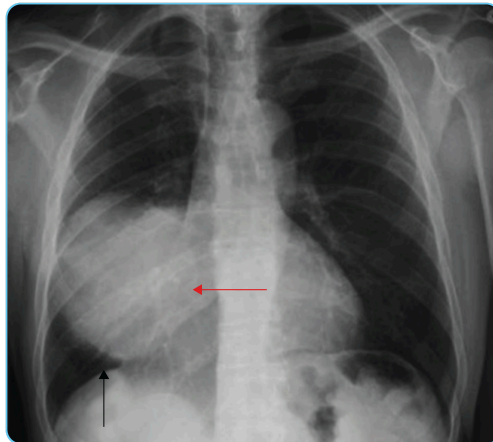
- It is a widespread shearing injury of axons in the brain caused by rapid acceleration-deceleration or rotational forces, most commonly occurring at the grey-white matter junction, corpus callosum, and brainstem, presenting as Immediate loss of consciousness with poor GCS and normal CT imaging; MRI (especially SWI/DWI) shows microhemorrhages and axonal injury.

93. **Brain abscess:**



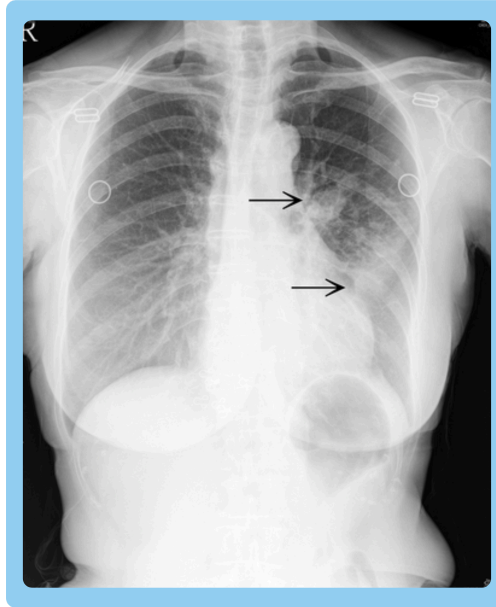
- Brain abscess appears as a ring-enhancing lesion with a smooth, thin wall, a central necrotic cavity, and is often surrounded by vasogenic oedema on contrast-enhancing CT; with central restricted diffusion on DWI and hypointense centre on T1.

94. **Silhouette sign:** Right middle lobe pathology



- The silhouette sign denotes that juxtaposed structures or pathology of similar radiographic attenuation can obscure an anatomical border or interface.

95. **Air bronchogram:** Alveolar consolidation



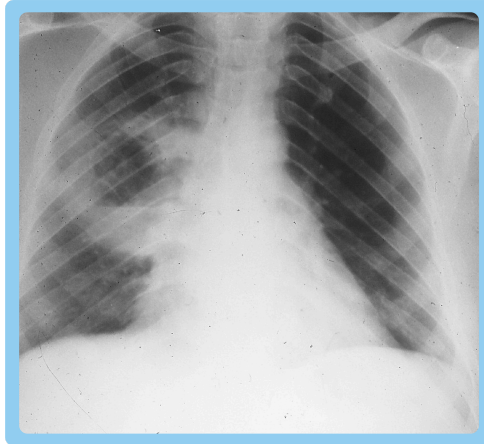
- A sign of lung consolidation where air-filled bronchi are visible as dark, branching lines against a white or opaque background of lung tissue.

96. **Bat-wing appearance:** Pulmonary edema



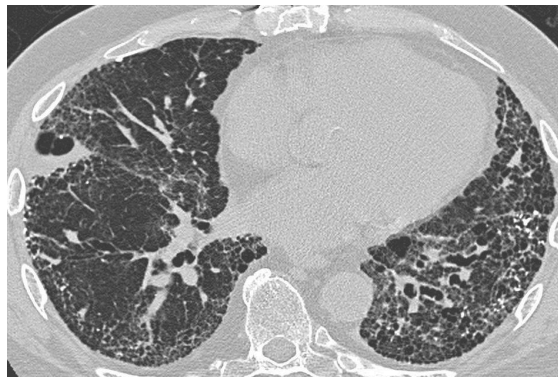
- It refers to **bilateral perihilar alveolar shadowing** radiating outward like wings of a bat, with **sparing of peripheral lung fields** seen in cardiogenic pulmonary edema due to left heart failure.

97. **Cavitation with air-fluid level:** Lung abscess



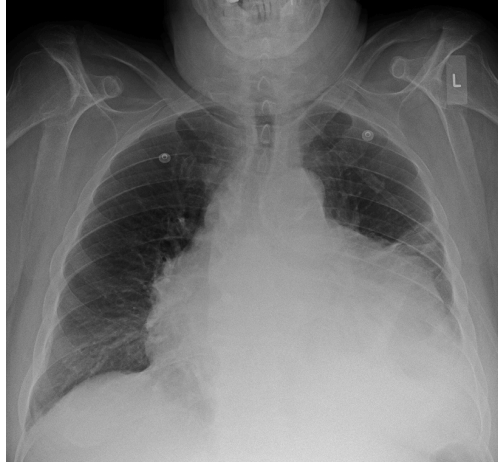
- Lung abscess is a localised collection of pus within the lung parenchyma, leading to necrosis and cavity formation seen on the chest x-ray as a cavity with an air–fluid level with thick, irregular walls, usually in dependent segments of lung (posterior segment of upper lobe or superior segment of lower lobe).

98. **Honeycomb lung:** End-stage pulmonary fibrosis



- Honeycombing or "honeycomb lung" is the radiological appearance seen with widespread pulmonary fibrosis and is defined by the presence of small cystic spaces with irregularly thickened walls composed of fibrous tissue, seen in pneumoconiosis, drug use(bleomycin).

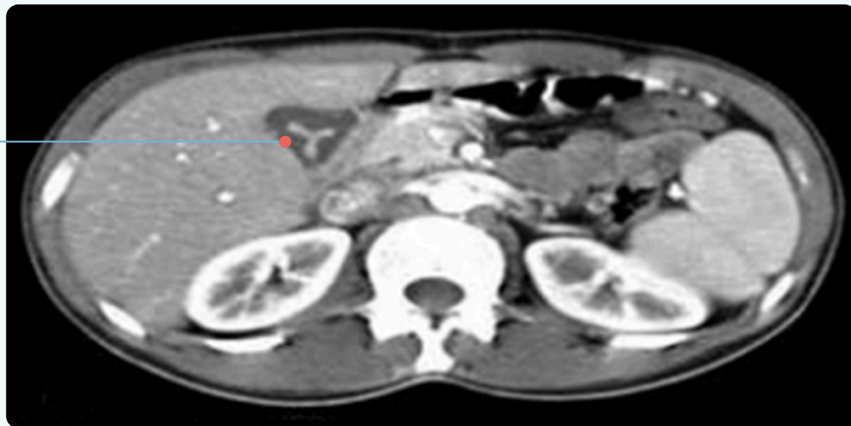
99. **Water bottle heart:** pericardial effusion



- A globular or symmetrical enlargement of the cardiac silhouette on chest X-ray resembling a water bottle, typically without pulmonary congestion seen in pericardial effusion (>250–300 mL).

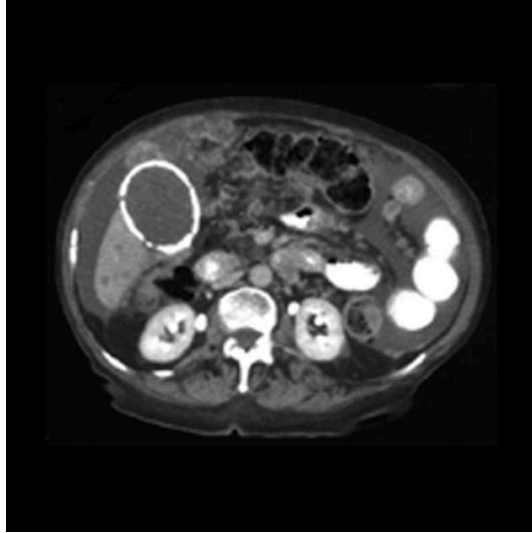
100. **Mercedes-Benz sign:** Cholelithiasis

Mercedes-Benz sign



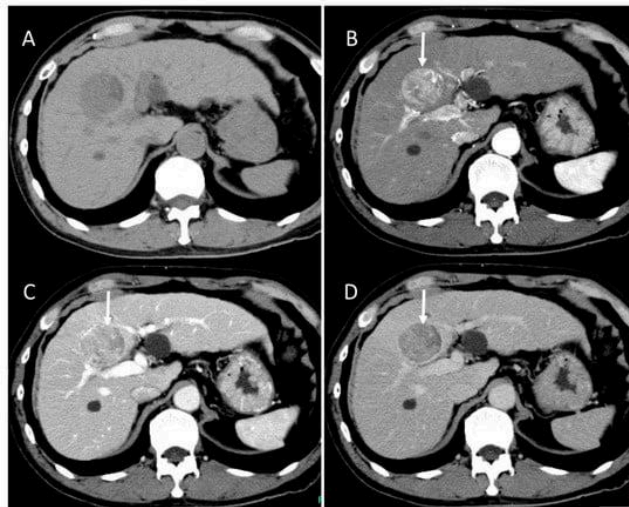
- Gas lucency within a radiolucent or partially calcified gallstone forming a triradiate pattern resembling the Mercedes-Benz logo, seen in Plain X-ray or CT abdomen.

101. **Porcelain gallbladder:** Associated with chronic cholecystitis



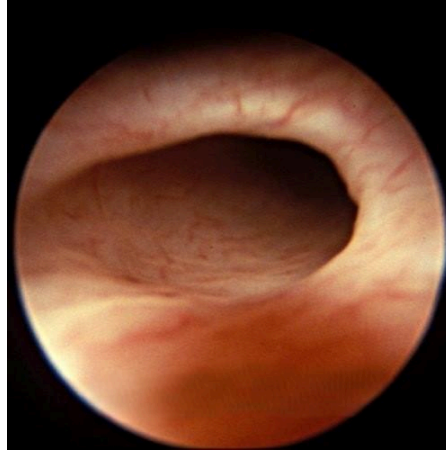
- Diffuse, curvilinear or mural calcification along the gallbladder wall, giving it a brittle, bluish appearance on gross pathology and dense radiopacity on imaging, with an increased risk of gallbladder carcinoma.

102. **Triple phase CT:** Hepatocellular carcinoma



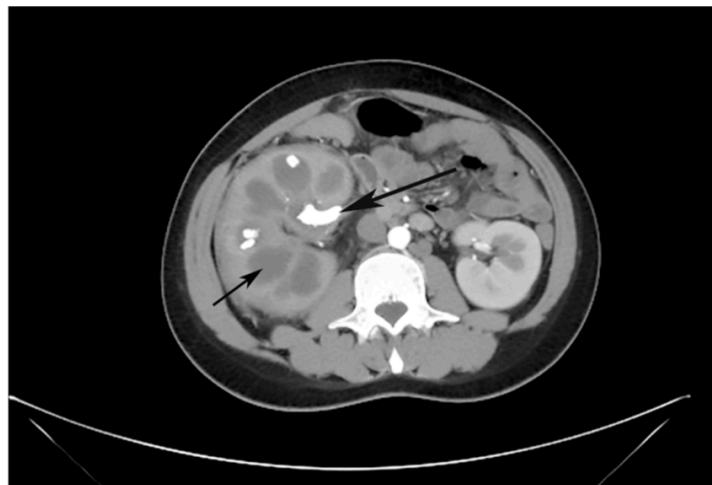
- Hepatocellular carcinoma on CT shows arterial phase hyperenhancement with washout in portal venous/delayed phase, often with a capsule.

103. **Golf hole ureteric orifice:** chronic cystitis



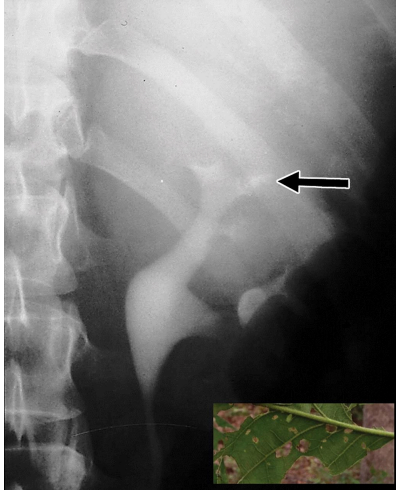
- A dilated, patulous ureteric orifice seen on cystoscopy or IVU, seen in chronic cystitis, often due to chronic infection or reflux.

104. **Bear-paw sign:** Xanthogranulomatous pyelonephritis



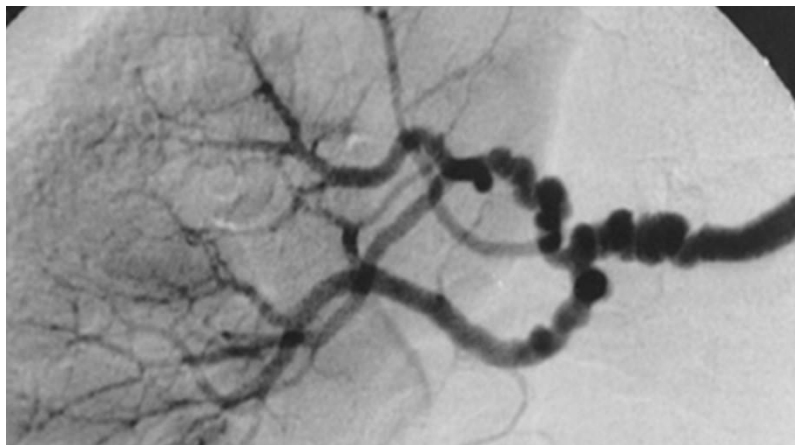
- Enlarged kidney with dilated calyces, Low-attenuation areas representing abscesses, thickened renal parenchyma and stones are often present with the dilated calyces, with intervening parenchyma resembling a bear's paw.

105. **Moth-eaten calyces:** renal tuberculosis



- Irregular, patchy destruction of renal calyces, on Intravenous Urography (IVU) or CT Urography, seen in renal tuberculosis, due to papillary necrosis, calyceal destruction, and fibrosis, often associated with cavitory lesions and ureteric strictures.

106. **String of beads:** fibromuscular dysplasia (renal artery)

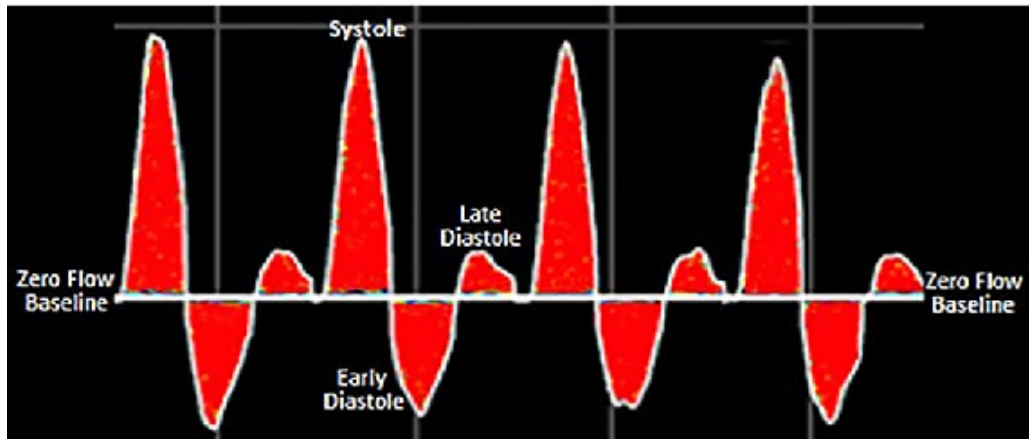


- Multiple alternating areas of stenosis and dilatation in an artery, giving the appearance of a string of beads on angiography, seen best on CT / MR angiography or conventional angiogram; represents medial fibrodysplasia, where fibrotic webs cause stenosis between segments of normal or dilated artery, can lead to renovascular hypertension.

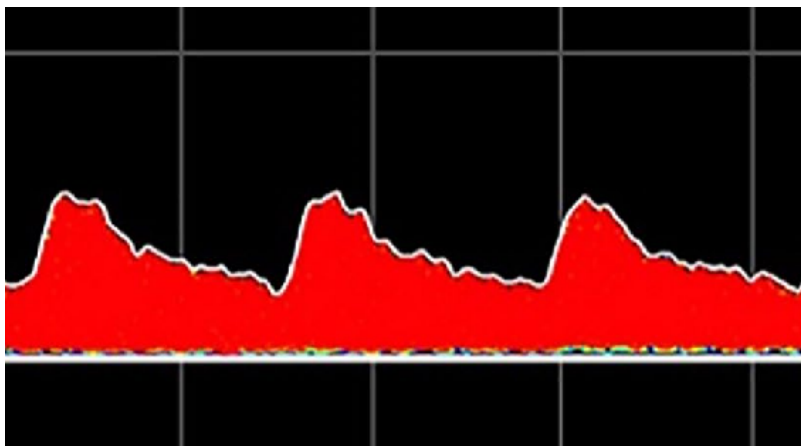
107. X-rays are **produced by the sudden deceleration of electrons** at the target (Bremsstrahlung radiation).

108. **Tungsten** is used as the target material in X-ray tubes.

109. The function of the **collimator** is to reduce **scatter radiation**.
110. **Inverse square law:** Intensity $\propto 1 / (\text{distance})^2$.
111. **Contrast** in X-ray depends mainly on **kVp**.
112. **Density** in X-ray depends mainly on **mAs**.
113. The safest trimester for radiological procedures in pregnancy is - **2nd trimester**
114. **Barium sulfate** is the contrast of choice for the GI tract.
115. **Water-soluble contrast (Gastrografin)** is used when perforation is suspected.
116. **Iohexol** is a non-ionic, low-osmolar contrast agent.
117. **Nephrotoxicity** is the most common complication of iodinated contrast.
118. **Gadolinium** is used as a contrast in MRI.
119. **Nephrogenic systemic fibrosis** is associated with gadolinium in renal failure.
120. **Myelography** is done with non-ionic, water-soluble contrast in the subarachnoid space.
121. CT number of water = 0 HU.
122. CT number of air = -1000 HU.
123. CT number of bone $\approx +1000$ HU.
124. **MRI contrast** depends on proton density, T1 and T2 relaxation times.
125. **T1-weighted MRI:** fat bright, fluid dark.
126. **T2-weighted MRI:** fluid bright, fat moderately bright.
127. **FLAIR** suppresses CSF signal on T2 images.
128. **Diffusion-weighted MRI** is most sensitive for **acute ischemic stroke**.
129. **Gadolinium** shortens **T1 relaxation time**, making lesions appear bright.
130. **Triphasic waveform in Doppler:** Normal artery in extremities

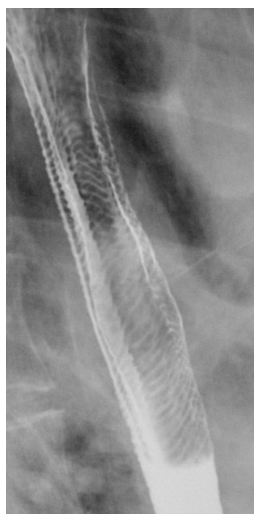


131. Monophasic waveform in Doppler: normal veins.



132. **Sonovue** is the contrast used in USG which is safe in renal failure.

133. **Feline esophagus:** Eosinophilic esophagitis



- Appearance of multiple fine, transverse mucosal folds in the lower esophagus resembling a cat's (feline) esophagus on barium swallow (esophagogram); Transient finding in normal individuals due to muscular contractions but persistent or prominent folds may be seen in gastroesophageal reflux disease (GERD) or esophagitis.

134. **Shaggy appearance of esophagus:** Candida esophagitis (AIDS-defining illness)



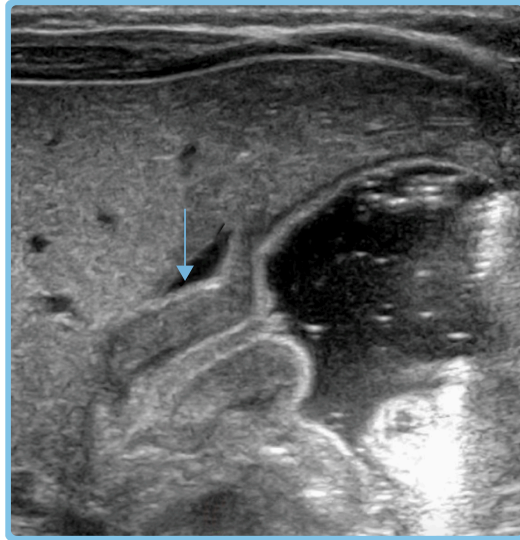
- On barium swallow, the esophageal mucosa appears irregular, shaggy, or ulcerated due to coating of barium in inflamed or ulcerated mucosa; Can also be seen in herpetic or CMV esophagitis in immunocompromised patients.

135. **Claw sign in barium enema:** Intussusception



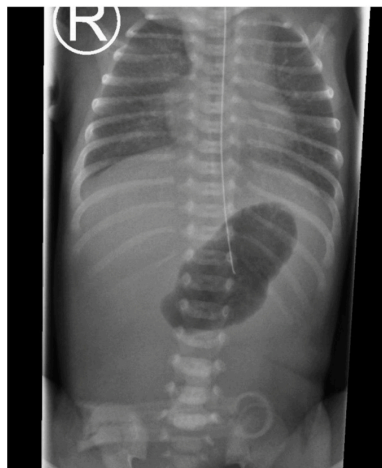
- A curved filling defect with smooth, claw-like margins of contrast outlining an intraluminal mass or intussuscepted bowel segment on barium enema.

136. **Congenital hypertrophic pyloric stenosis:**



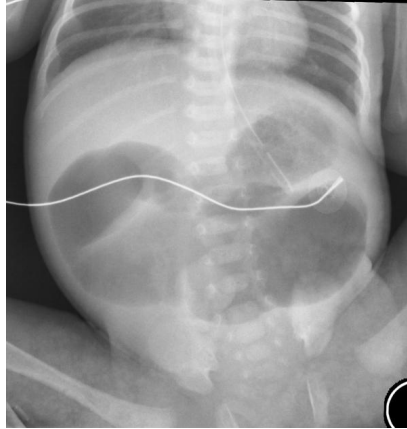
- 16mm x 4 mm, with h/o projectile non-bilious vomiting.

137. **Single bubble sign:** CHPS



- A single, large gas-filled bubble in the stomach on neonatal abdominal X-ray, indicating obstruction distal to the stomach, classically seen in pyloric atresia or gastric outlet obstruction.

138. **Triple bubble sign:** Jejunal atresia



- Three air-filled dilated intestinal loops are seen on neonatal abdominal X-ray, indicating obstruction at the jejunum, seen in jejunal atresia, and the three bubbles represent the dilated stomach, duodenum, and proximal jejunal loop.

139. **C-sign:** Cecal volvulus



- Single, large, air-filled loop of colon (often displaced to the left upper quadrant), kidney-shaped or coffee-bean-shaped dilated cecum and absent gas in distal colon and rectum.

140. **Saw-tooth sign:** Sigmoid diverticulosis



- On barium enema, the sigmoid colon wall shows multiple small, irregular outpouchings giving a serrated or “saw-tooth” contour, which indicates a chronic diverticular disease.

141. **Shaking hand calyces/Flower vase sign:** Horse-shoe kidney



- The crossed, fused lower poles of a horseshoe kidney resemble hands shaking on imaging, especially on IVU or CT urography, with abnormal location of ureters - anterior to isthmus and malrotated renal parenchyma.

142. **Putty kidney:** End-stage genitourinary TB



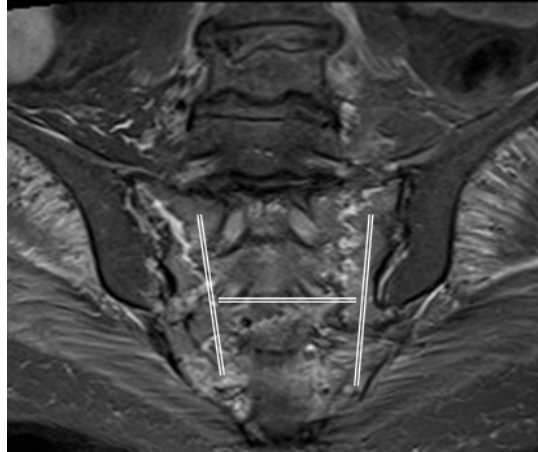
- A shrunken, non-functioning kidney replaced by caseous material and calcification, giving a putty-like appearance, which is a classic finding in end-stage renal tuberculosis and represents autonephrectomy due to chronic infection.

143. **Spider-leg sign:** ADPCKD



- The appearance of multiple contrast-filled calyces radiating from the renal pelvis on imaging, resembling spider legs seen on Intravenous urography (IVU).

144. **Honda or H sign:** Sacral insufficiency fractures



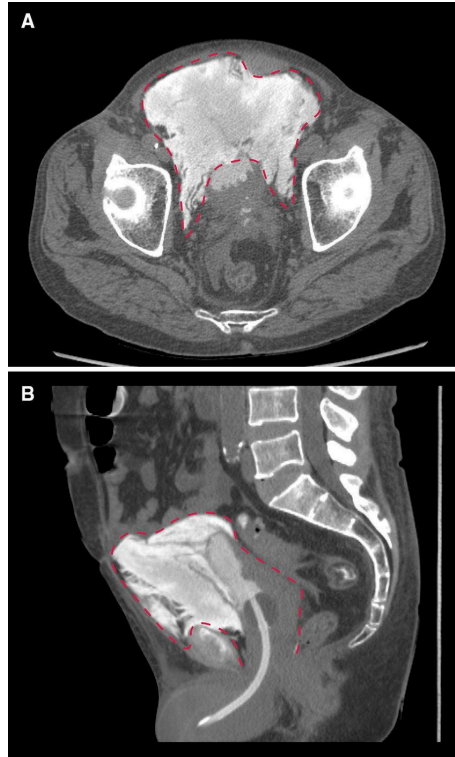
- U-shaped or H-shaped radiotracer uptake in the sacrum on a bone scan, resembling the Honda logo or the letter “H” seen on Bone scintigraphy / Tc-99m MDP bone scan, classic for sacral insufficiency fractures; common in osteoporosis, elderly, or postpartum women; represent bilateral vertical and one horizontal fracture lines.

145. **Key-hole sign on USG:** Posterior urethral valve



- Dilated bladder with proximal urethral dilation, resembling a key-hole on ultrasound, seen on Ultrasound (USG) of pelvis / fetal USG, classic for posterior urethral valves (PUV) in male infants, often associated with hydronephrosis.

146. **Flame or Molar-tooth appearance:** Extraperitoneal bladder rupture



- On retrograde cystography, extraperitoneal contrast extravasation outlines the perivesical space, creating a flame-shaped or molar-tooth appearance; contrast leaks into perivesical tissues; Cystogram is the imaging modality of choice; classic for extraperitoneal bladder rupture; usually due to pelvic fracture or blunt trauma; differentiates from intraperitoneal rupture, which shows contrast outlining bowel loops.

147. **Christmas tree bladder:** Neurogenic bladder



- The dilated, irregular bladder on imaging with spiculated or thorn-like trabeculations resembling a Christmas tree, seen on Intravenous urography (IVU) or CT/MR urography,

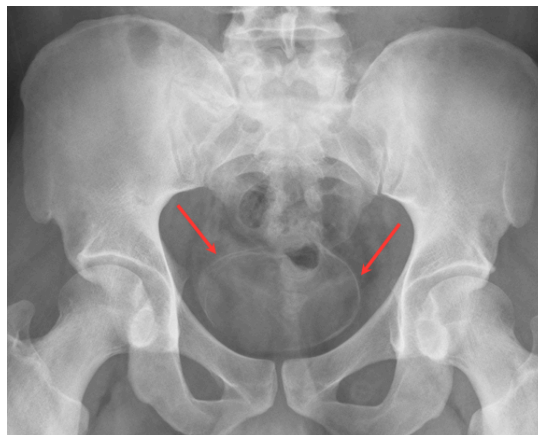
in neurogenic bladder seen in spinal cord injury, spina bifida, or diabetic neuropathy; which indicates chronic high-pressure bladder with trabeculations and diverticula.

148. Tear drop or pear shaped bladder: pelvic lipomatosis



- The bladder assumes a tear-drop or pear-shaped contour on imaging due to extrinsic compression by pelvic fat, seen on Intravenous urography (IVU) or CT pelvis, Classically seen in pelvic lipomatosis caused by excessive deposition of fat in the perivesical and perirectal spaces and can lead to urinary obstruction or secondary hydroureteronephrosis.

149. Fetal head in pelvis appearance: Schistosomiasis



- The "fetal head in pelvis" appearance on the pelvic radiograph is pathognomonic for chronic urinary schistosomiasis; Pelvic radiograph shows the classic appearance of the calcified bladder, which resembles a fetal head in the pelvis, with associated faint calcification of the distal right ureter.

150. **Jackstone appearance:** Calcified bladder stone



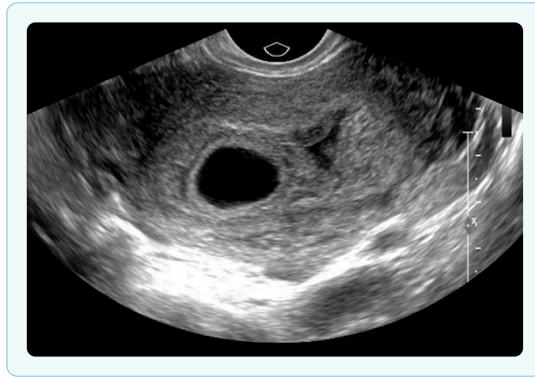
- A spiculated or star-shaped urinary calculus resembling a jack toy on Plain X-ray KUB, Most commonly seen in bladder calculi, composed of calcium oxalate dihydrate, typically single, large, and spiculated.

151. **Intradecidual sign:**



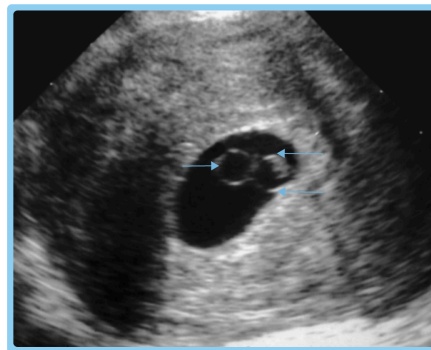
- Early intrauterine gestational sac seen within the thickened endometrium (decidua) on transvaginal ultrasound, and is the earliest reliable sign of intrauterine pregnancy, visible at 4–5 weeks of gestation, and helps differentiate from pseudogestational sac of ectopic pregnancy.

152. **Double decidual sign:**



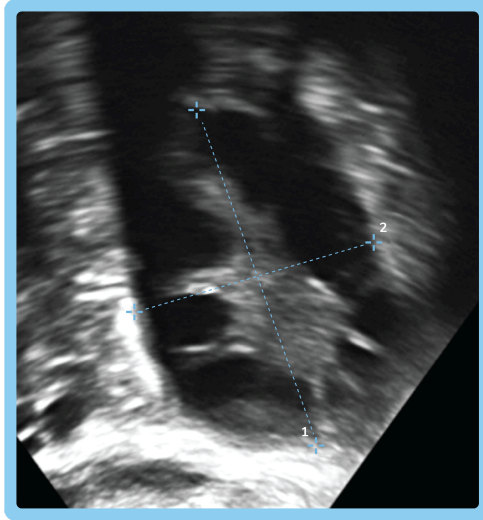
- Two concentric echogenic rings surrounding a small intrauterine gestational sac on transvaginal ultrasound, representing the decidua capsularis and decidua parietalis, confirms intrauterine implantation.

152. **Double bleb sign:** Yolk sac and gestational sac



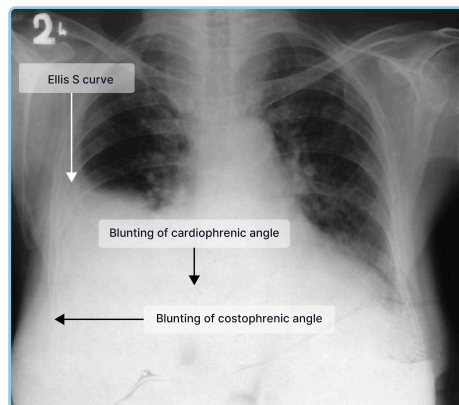
- On first-trimester ultrasound at 5–6 weeks gestation, the two adjacent fluid-filled sacs seen in the embryo: the gestational sac and the yolk sac, giving a “double bleb” appearance, helps differentiate gestational sac from pseudogestational sac.

153. **String of pearl appearance:** PCOS



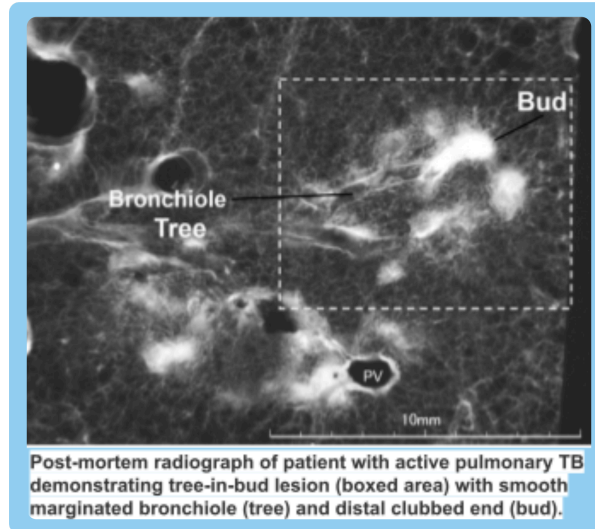
- Multiple peripheral ovarian follicles measuring 2-9mm in size arranged along the ovarian cortex, resembling a string of pearls, seen on ultrasound, classically seen in Polycystic Ovary Syndrome (PCOS).

154. **Ellis' S curve:** Pleural effusion



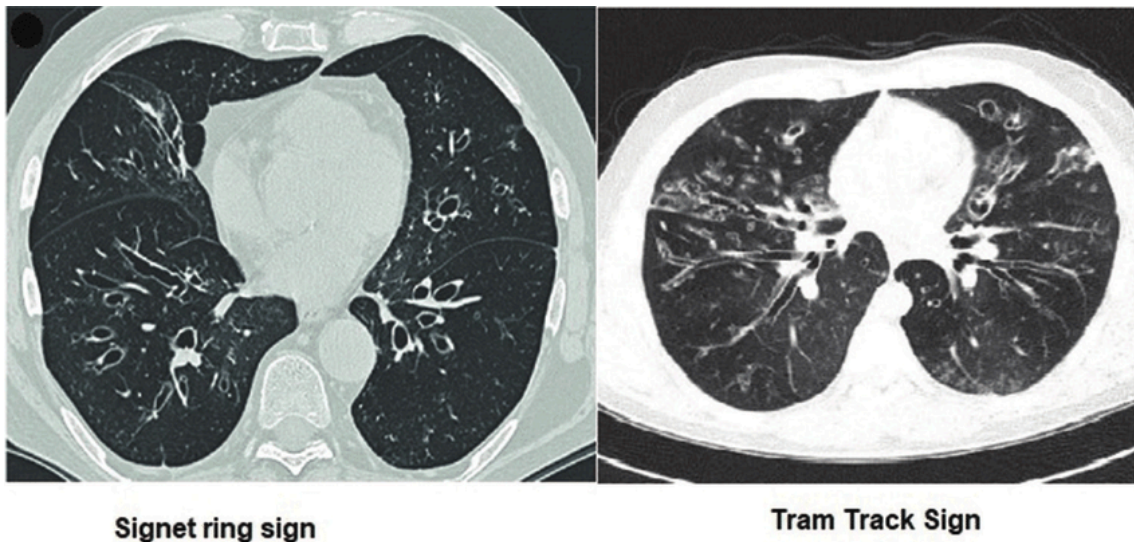
- Usually seen on a lateral chest X-ray, the posterior costophrenic angle shows a concave upward S-shaped curve due to fluid accumulation in pleural effusion.

155. **Tree in bud appearance:** Active TB



- Small centrilobular nodules with linear branching opacities on high-resolution CT, resembling a budding tree, classic feature of endobronchial spread of infection, most commonly active pulmonary tuberculosis (TB); Can also be seen in bronchiectasis, bacterial or viral infections.

156. **Signet ring and Tram-track sign:** Bronchiectasis



- Enlarged bronchus (“the ring”) with adjacent dilated pulmonary artery (“gem”) on HRCT, giving the appearance of a signet ring; Tram track refers to parallel linear opacities representing thickened bronchial walls on chest X-ray or CT; usually seen in bronchiectasis.

157. **Halo sign:** Invasive aspergillosis



HALO SIGN: Multiple pulmonary round infiltrates with surrounding ground glass opacity (Arrow)

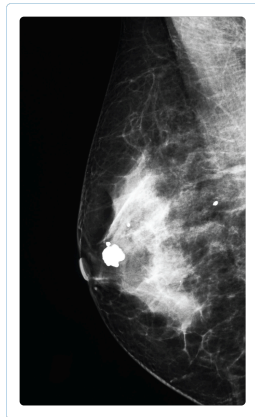
- A zone of ground-glass opacity surrounding a pulmonary nodule or mass on CT chest, resembling a halo, Classic for invasive pulmonary aspergillosis (especially in immunocompromised patients), which Represents hemorrhage around a nodule; Can also be seen in Wegener's granulomatosis (GPA), metastases (hemorrhagic) and pulmonary infarction.

158. **Reverse Halo sign:** Mucormycosis, Organising pneumonia



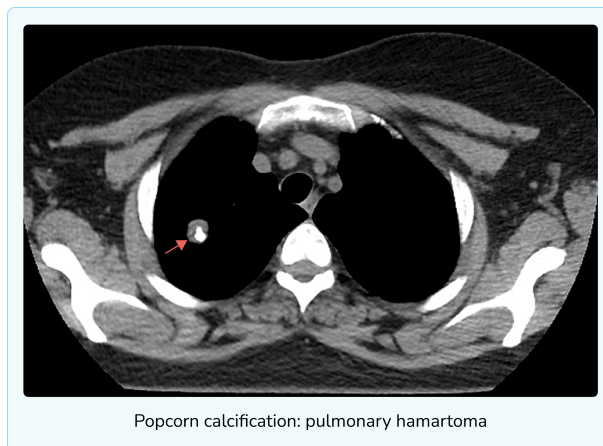
- A central ground-glass opacity surrounded by a denser ring of consolidation on CT chest, giving a “reverse halo” appearance; seen in organizing pneumonia (Cryptogenic or secondary) and pulmonary mucormycosis (especially in immunocompromised or diabetic patients); and it represents central alveolar involvement with peripheral inflammation/consolidation.

159. **Popcorn calcification of breast:** Fibroadenoma



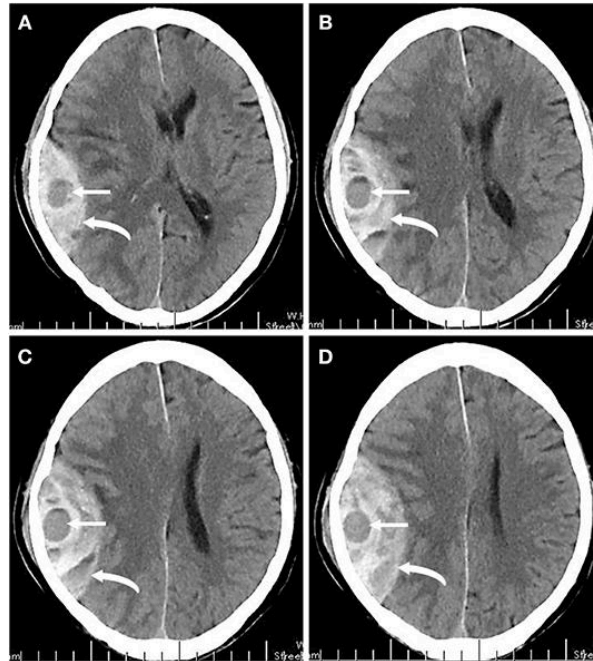
- Large, coarse, “popcorn-like” calcifications within a breast lesion on mammography, classically seen in an involuting fibroadenoma, it indicates a benign lesion undergoing hyalinization and calcification, and are usually a well-circumscribed, slow-growing lesion.

160. **Popcorn calcification in the lung:** Pulmonary hamartoma/Chondroma



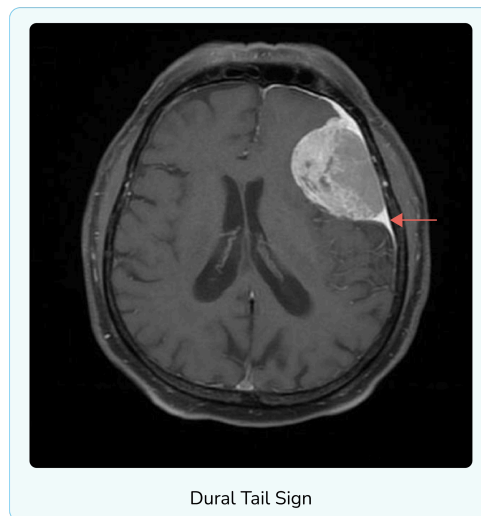
- A well-circumscribed, solitary, peripheral nodule, coarse, chunky, “popcorn-like” calcifications within a pulmonary nodule on Chest X-ray or CT chest, classically seen in pulmonary hamartoma (most common benign lung tumor), May also be seen in pulmonary chondroma.

161. **Swirl sign:** EDH



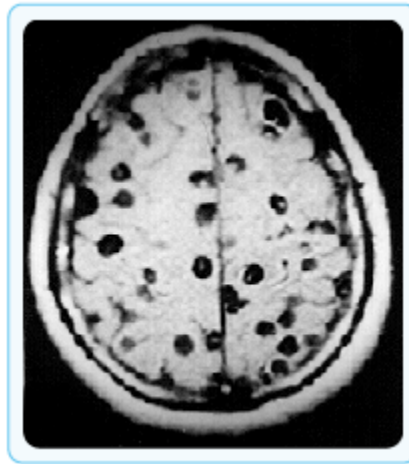
- A mixed-density area within an epidural hematoma (EDH) on NCCT, with hypodense region swirling within hyperdense clot, representing active bleeding, Associated with rapid hematoma expansion and neurological deterioration, requires urgent neurosurgical intervention.

162. **Dural tail sign:** Meningioma



- Thickened, enhancing dural margin tapering away from a mass on contrast-enhanced MRI, resembling a tail, classically seen in meningioma, and it represents reactive dural thickening and vascularity, but can also be seen in lymphoma, metastases, or inflammatory lesions.

163. **Starry sky appearance of brain:** Neurocysticercosis



- Multiple small hyperdense foci scattered throughout the brain parenchyma on CT brain (non-contrast or contrast-enhanced) or MRI, resembling a “starry sky”, classically seen in neurocysticercosis (NCC), especially the vesicular or colloidal stage, represents multiple cysticerci throughout the brain parenchyma.

164. **Shepherd crook deformity:** Fibrous dysplasia



- Marked coxa vara of the proximal femur with coiled, shepherd's crook–like femoral neck on X-ray pelvis/hip, classically seen in fibrous dysplasia of the proximal femur, caused by weakening and bowing of the femoral neck due to fibro-osseous replacement, may lead to limb shortening, gait disturbance, and pathological fractures.

165. **Flowing candle wax appearance:** Diffuse idiopathic skeletal hyperostosis (DISH)



- Thick, flowing ossification along the anterolateral aspect of the vertebral bodies, resembling melted candle wax seen on X-ray spine (lateral view) or CT spine, classic for Diffuse Idiopathic Skeletal Hyperostosis (DISH); non-marginal, flowing ossifications without significant disc space narrowing, commonly involving the thoracic spine and may cause stiffness or dysphagia if the cervical spine is involved.

166. **Rugger jersey spine:** Secondary hyperparathyroidism/ Renal osteodystrophy



- Sclerotic bands along the superior and inferior endplates of vertebral bodies with a relatively lucent central portion, resembling a rugby jersey seen in secondary

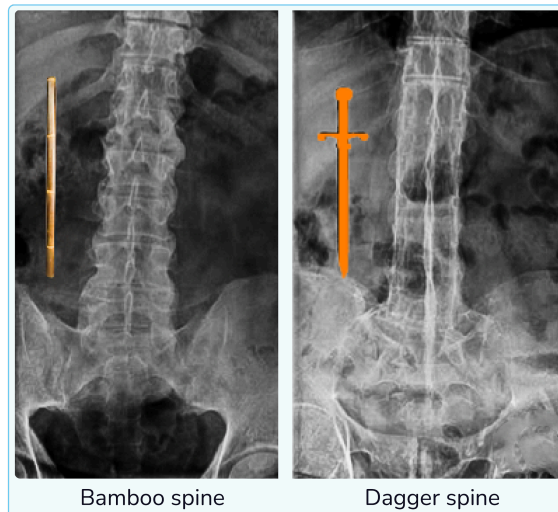
hyperparathyroidism (commonly due to renal osteodystrophy). They represent subchondral sclerosis from chronic metabolic bone disease.

167. **Dagger sign:** Ankylosing spondylitis



- Single central dense line of ossification on AP radiograph of the spine, representing ossified supraspinous and interspinous ligaments, seen in advanced ankylosing spondylitis (AS).

168. **Bamboo spine:** Ankylosing spondylitis

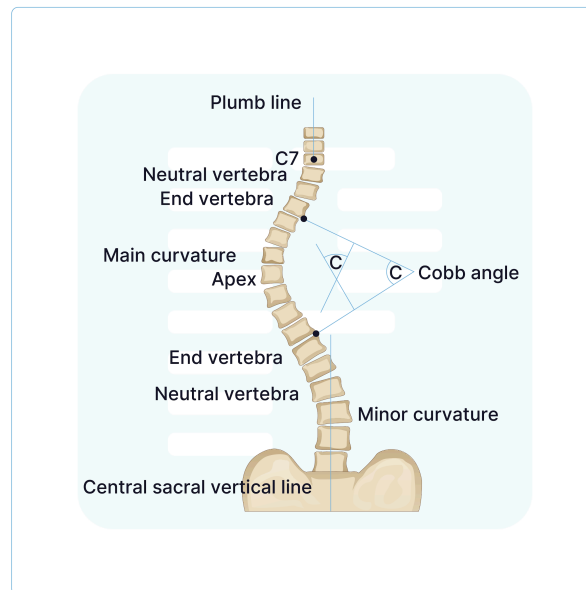


Bamboo spine

Dagger spine

- Squaring of vertebral bodies with bridging syndesmophytes, giving the spine a bamboo-like appearance on X-ray, is seen in ankylosing spondylitis (AS) due to ossification of the anterior longitudinal ligament and syndesmophytes.

169. **Cobb's angle:** Ankylosing spondylitis



- The angle formed between the superior endplate of the most tilted vertebra above the curve apex and the inferior endplate of the most tilted vertebra below the apex, used to quantify spinal curvature in scoliosis; $>10^\circ$ is considered a scoliotic curve.

170. **Double-density sign:** Allergic fungal rhinosinusitis



- Two concentric densities within a sinus on CT, representing hyperdense allergic mucin within an air-filled sinus cavity seen in allergic fungal sinusitis (AFS).