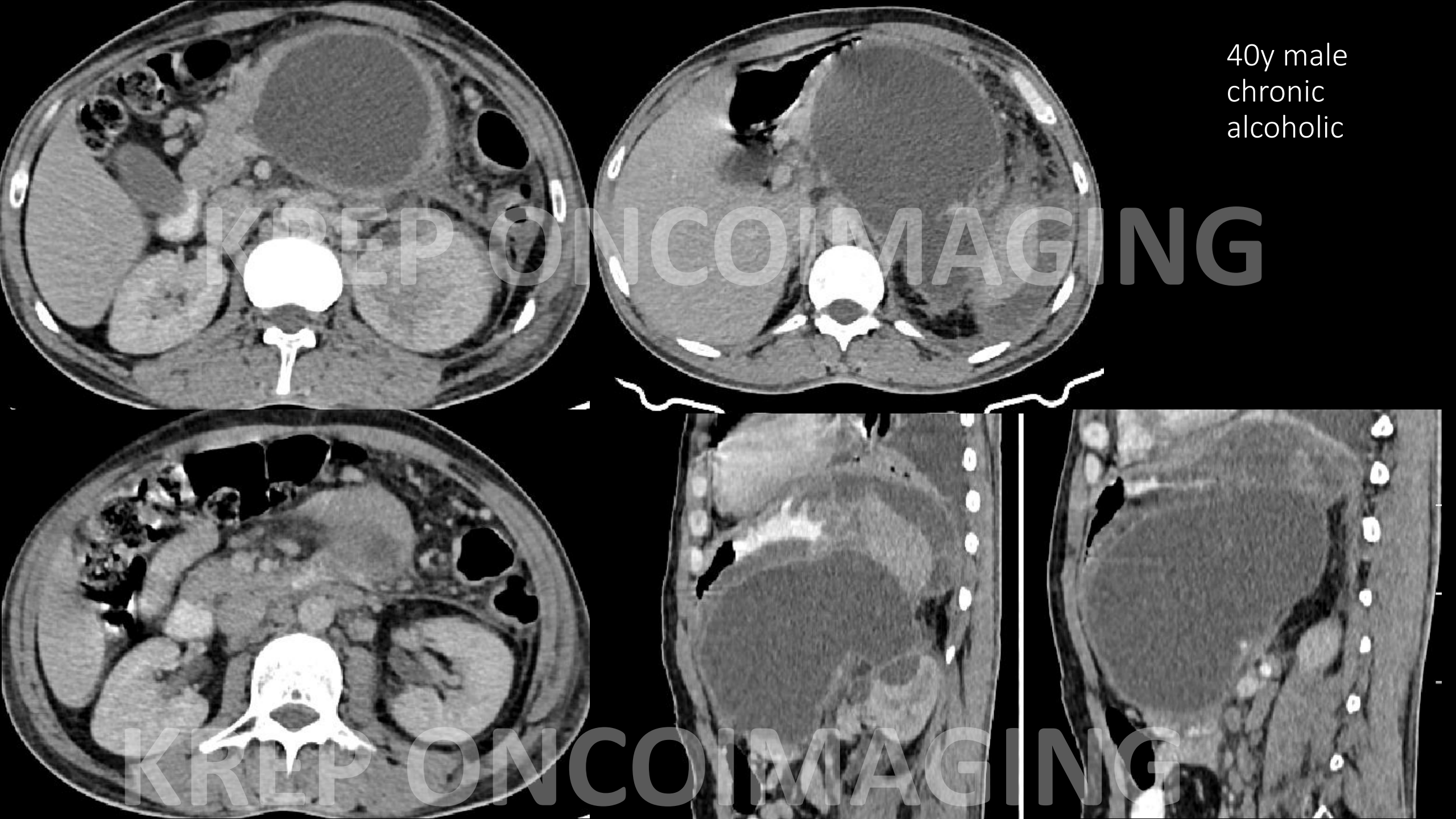
2025

KARNATAKA RADIOLOGY EDUCATION PROGRAM


40y male
chronic
alcoholic
KREP ONCOIMAGING
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- Large rim enhancing fluid attenuating area in region of body and tail of pancreas measuring about 10 x 12 x 15 cm. Wall thickness measures 0.25 mm. No mural nodule. No internal enhancing areas. No isodense or hyperdense contents. No gas foci.
  - A segment of splenic artery is seen within the lesion.
  - Anteriorly there is mass effect upon stomach (wall shows hypoenhancing mural thickening possibly submucosal edema / inflammatory etiology)
  - Posteriorly there is extension into left paranephric space with a small component compressing left renal upper pole parenchyma.
- Moderate left pleural effusion is noted. Minimal ascites was noted.
- The visualized pancreatic parenchyma shows normal enhancement. MPD was not dilated. No calcific foci within.
- A large perisplenic collection is noted. Spleen otherwise is normal in size and shows normal enhancement.
- Adjacent omental fat stranding was noted. No nodularity.
- Multiple prominent and few enlarged para-aortic lymph nodes are noted showing homogeneous enhancement, likely reactive.

- There are no features to suggest cystic neoplasm, this likely represents a pancreatic pseudocyst with perisplenic and paranephric collection, moderate left pleural effusion, ascites; mCTSI 6/10.
- Gastric mural hypoenhancing thickening is mostly submucosal edema, can be correlated clinically and followed up with a USG before discharge to document resolution.
- This person is prone for pseudoaneurysm development.

1. **Definition & Pathophysiology:**
   - A **well-circumscribed, encapsulated fluid collection** rich in pancreatic enzymes, arising as a **delayed (>4 weeks)** complication of **acute or chronic pancreatitis**.
   - Lacks an epithelial lining (hence *pseudocyst*); walls composed of **granulation and fibrous tissue**.
2. **Etiology:**
   - Most commonly associated with **alcoholic pancreatitis, gallstone pancreatitis, trauma**, or **post-necrotic pancreatic duct disruption**.
   - Chronic pancreatitis produces **multiple, recurrent pseudocysts** from ductal outflow obstruction.
3. **CT Imaging Features (Primary Modality):**
   - **Round or ovoid, well-defined fluid-attenuation lesion** with **thin or moderately thick enhancing wall**.
   - May exert **mass effect** on adjacent organs (stomach, spleen, kidney).
   - **No internal solid enhancing components** (if present → consider walled-off necrosis or cystic neoplasm).
   - May contain **debris, hemorrhage, or infection** causing heterogeneous attenuation.
4. **MRI Characteristics:**
   - **T1:** Low signal unless hemorrhagic/high protein content.
   - **T2:** Homogeneously hyperintense fluid cavity.
   - **Post-contrast:** Thin peripheral rim enhancement.
   - MRCP helps identify **pancreatic duct communication**, strictures, and ductal leaks.

5. **Distinguishing from Other Pancreatic Collections:**
   - **Acute peripancreatic fluid collection (<4 weeks):** no wall.
   - **Walled-off necrosis (WON):** thick wall + **non-enhancing solid necrotic debris**.
   - **Cystic neoplasm (MCN/SCN/IPMN):** internal septa, nodules, calcification, or enhancement.
   - **Abscess:** gas, thick irregular wall, clinical sepsis.
6. **Complications (Key Imaging Roles):**
   - **Infection** (air, thick irregular wall).
   - **Hemorrhage** (high T1 signal, pseudoaneurysm).
   - **Rupture** into peritoneal cavity or GI tract.
   - **Biliary or gastric outlet obstruction** from mass effect.
   - **Vascular compression** or thrombosis (splenic vein, portal vein).
7. **Management Implications:**
   - Asymptomatic pseudocysts are often **observed**.
   - Intervention indicated for **symptoms, infection, hemorrhage, persistent >6 weeks, >6 cm, or obstruction**.
   - **Endoscopic ultrasound-guided drainage** preferred; CT/MR defines **wall maturity** and **vascular proximity** (to avoid pseudoaneurysm bleed).
8. **Oncoradiologic Reporting Essentials:**
   - Size, location, wall thickness, internal debris, **pancreatic duct communication**, relation to vessels, signs of necrosis or infection.
   - Presence of **additional pseudocysts**, **walled-off necrosis**, or **pancreatic atrophy/calcifications** suggesting chronic pancreatitis.
   - Any **solid nodules or mural enhancement** must be highlighted for exclusion of **cystic neoplasm**.

Contributors

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