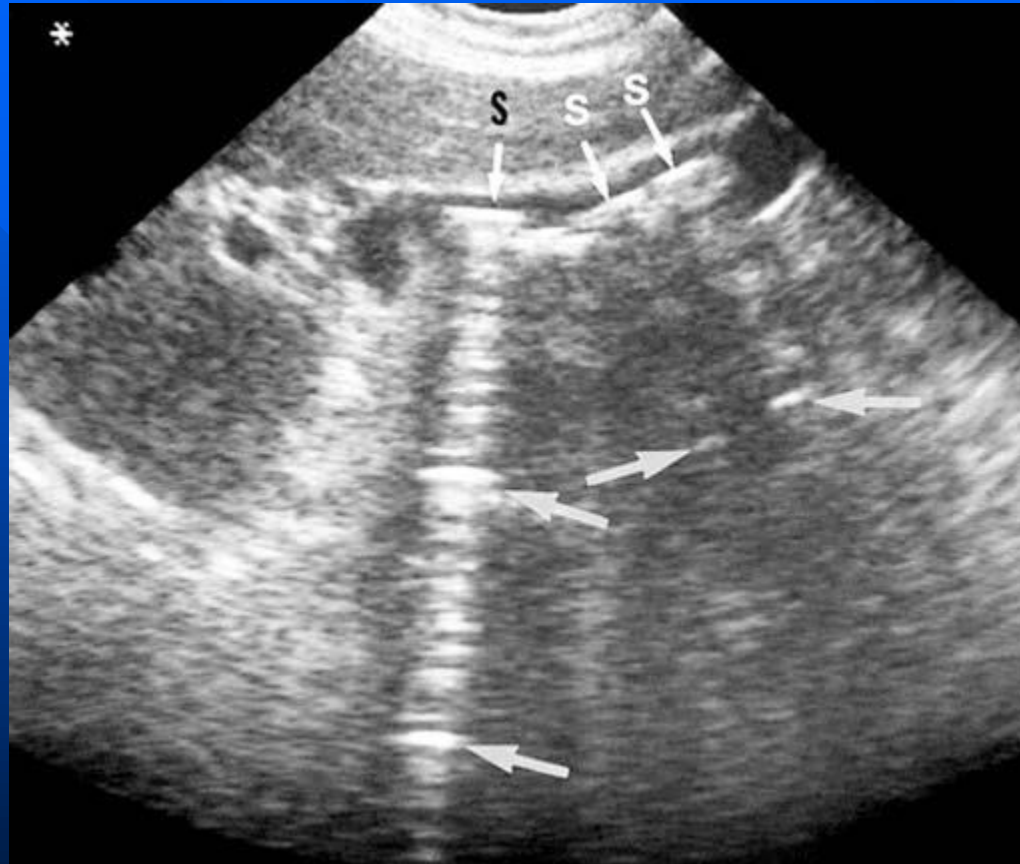


Calcified gallstones



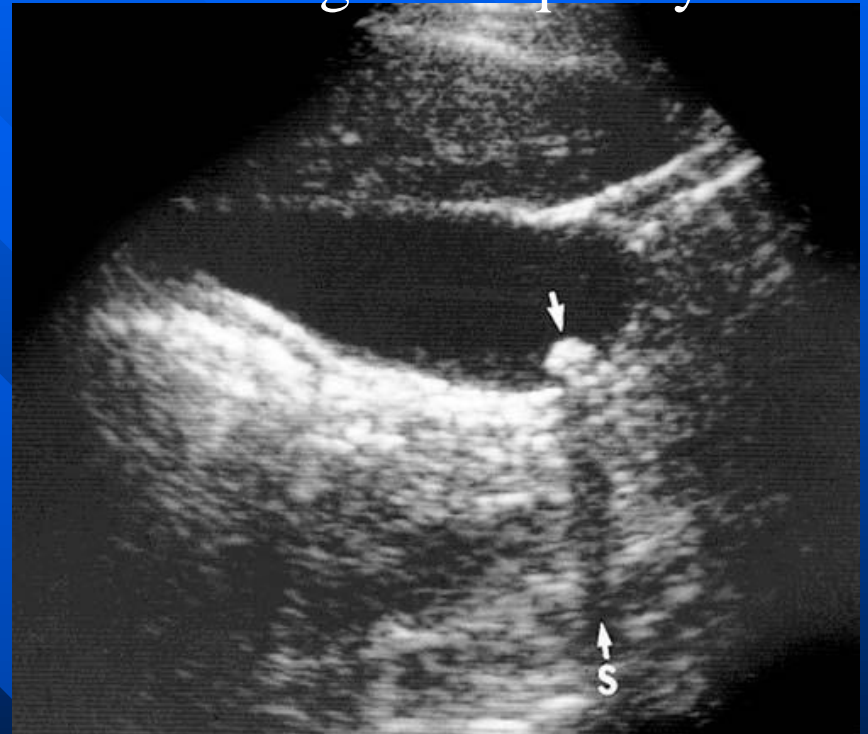
Calcified gallstones produce (S) reverberation artifacts (arrows) within the shadows. The stone with heavier calcification (black S) produces more prominent reverberations and comet tail artifacts.

Stone

Lower frequency



Higher frequency



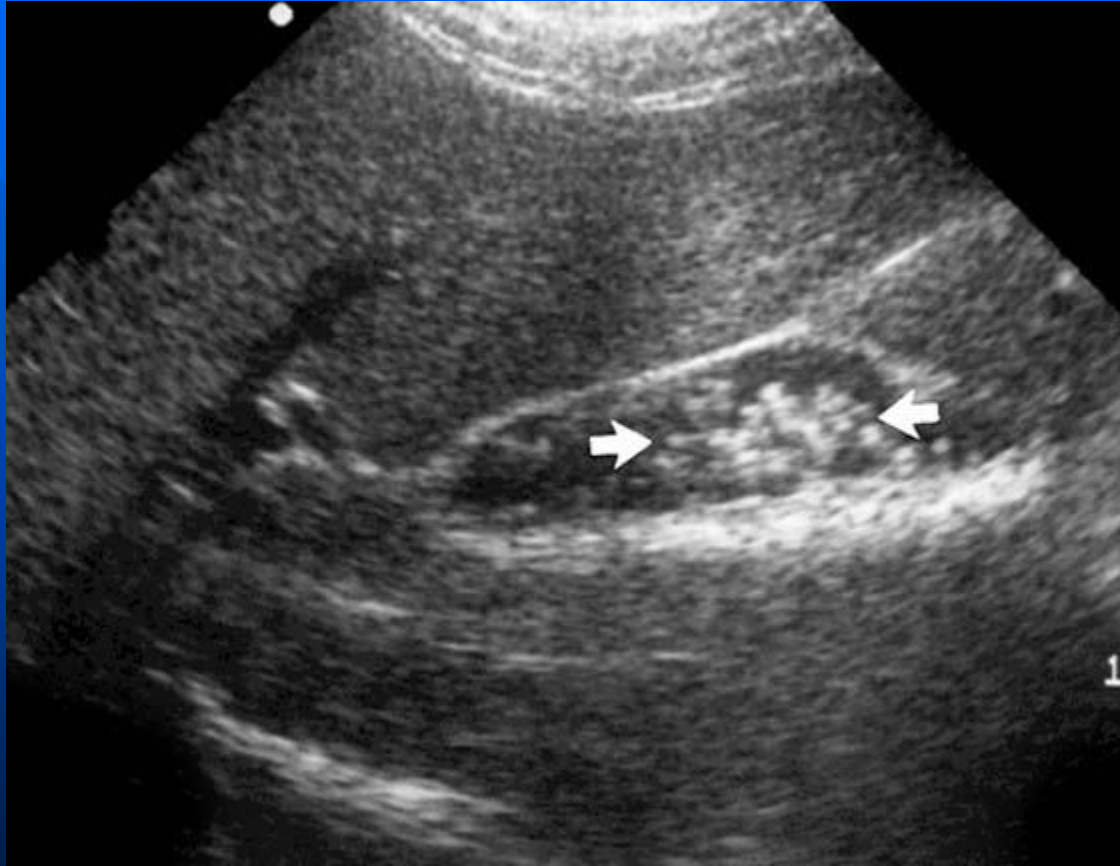
Shadowing depends on higher frequency


Multiple Stones



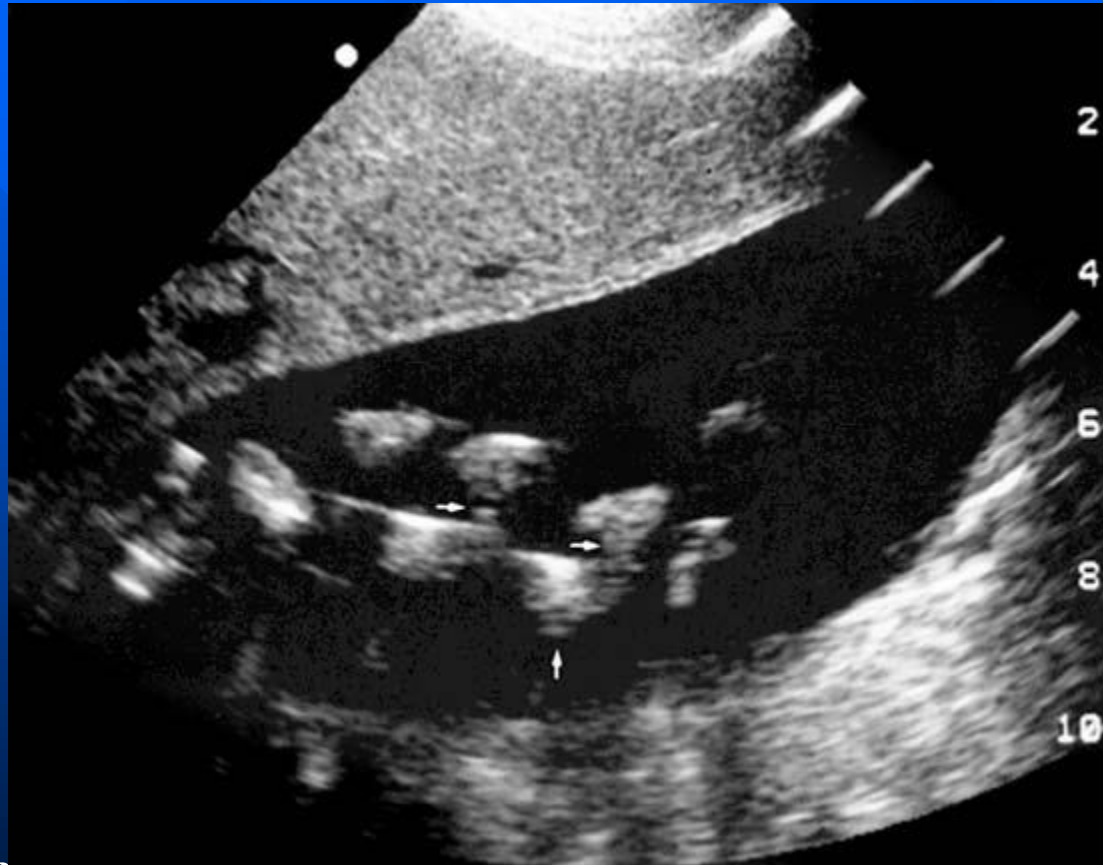
Multiple small stones layered together (arrows) produce acoustic shadowing

Small stones



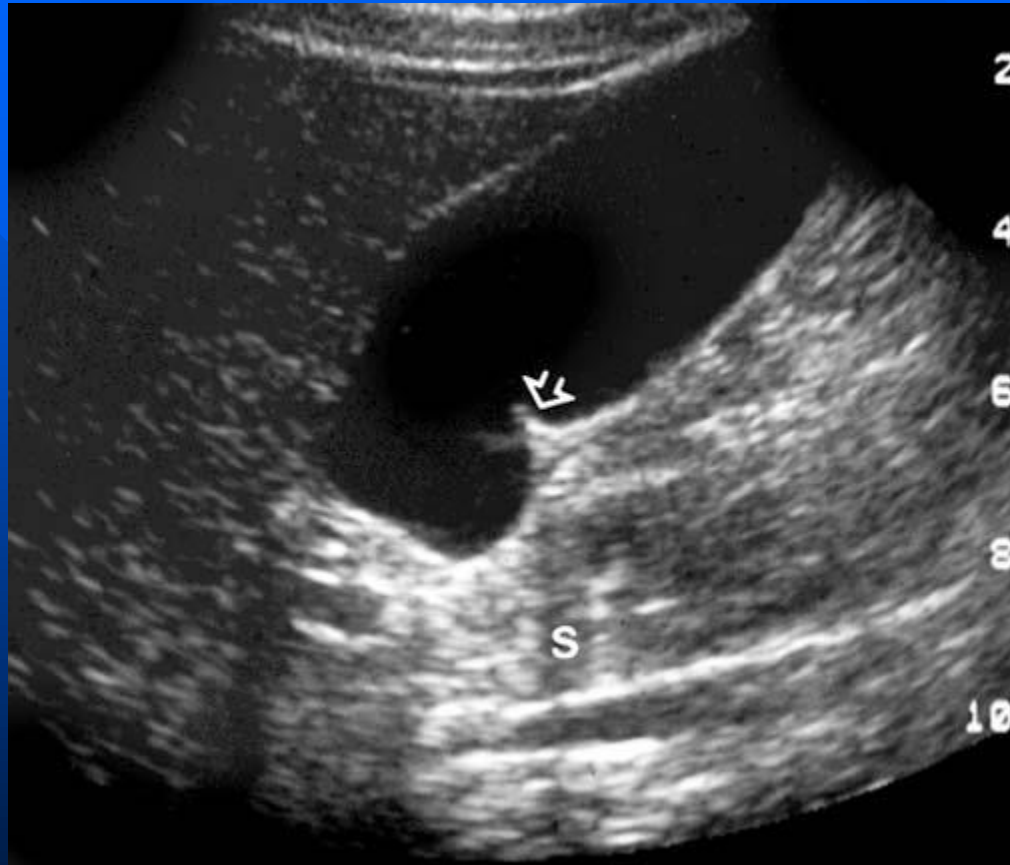
When the  bladder lumen (arrows), the small individual stones do not produce acoustic shadowing. The shadowing effect of multiple small stones is

Floating fissured stones



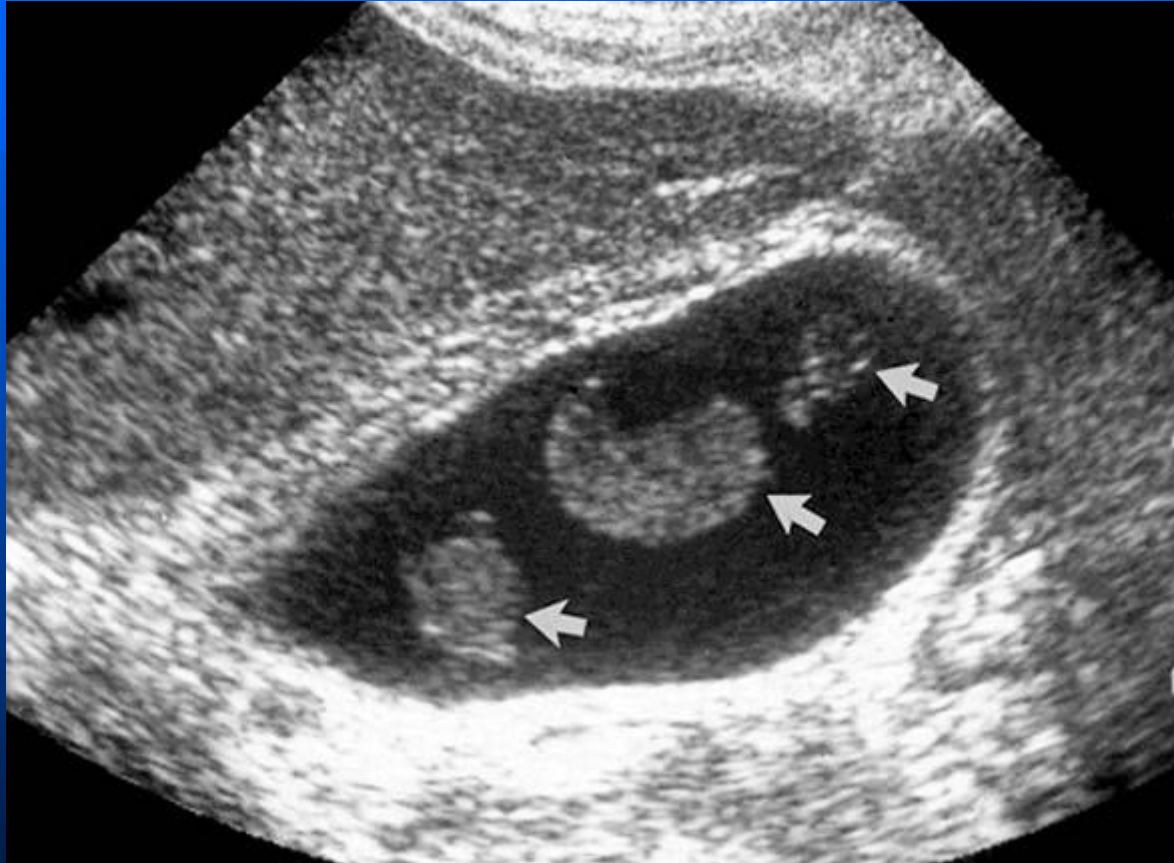
Several fissured stones are seen floating within the gallbladder. Some of the stones are associated with short comet tail artifact (arrows)

Fold



Part of a fold (arrow) within the gallbladder producing an acoustic shadow (S)

Sludgeballs



Sludgeballs (arrows) within the gallbladder appearing as nonshadowing echogenic structures

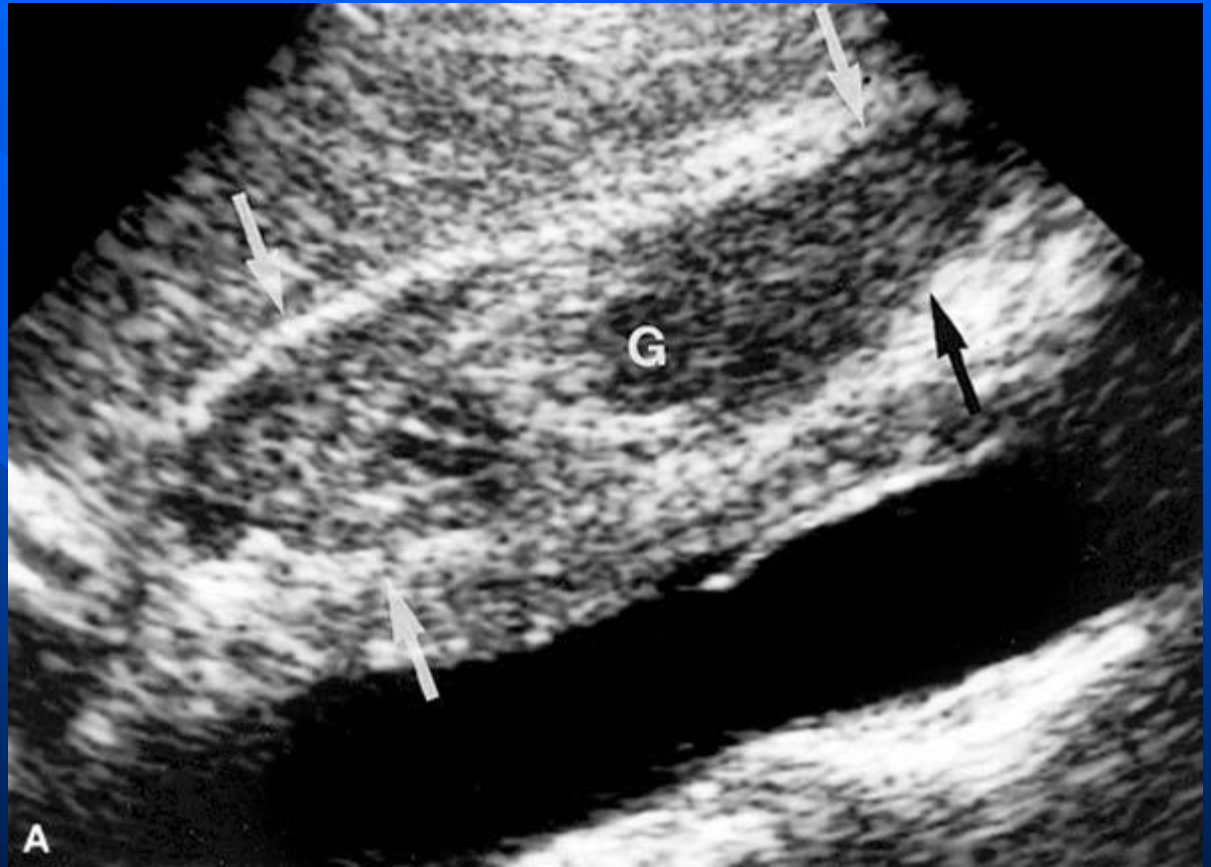
Pitfall



Residue in the bowel indenting the posterior wall of the gallbladder mimics gallstones (arrows) with distal acoustic shadowing.

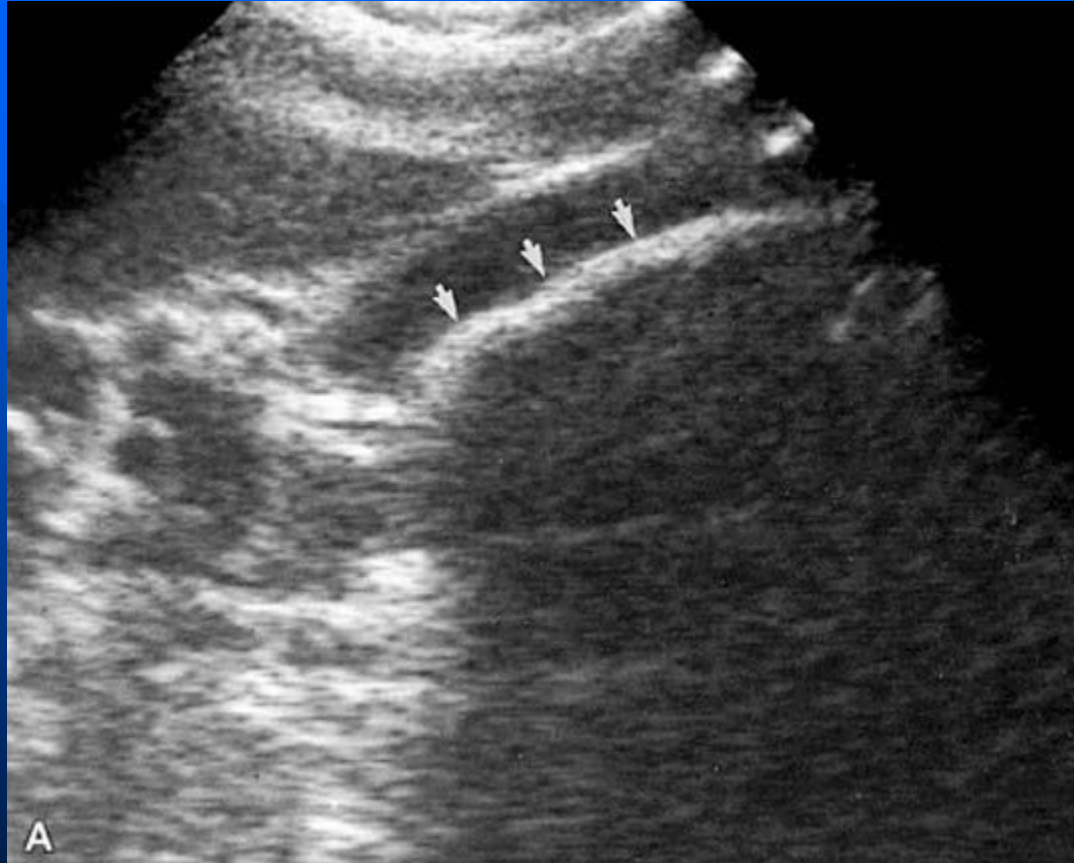
Hemobilia

Causes =
Trauma
Inflammation
CHOLELITHIASIS
vascular disease
neoplasms



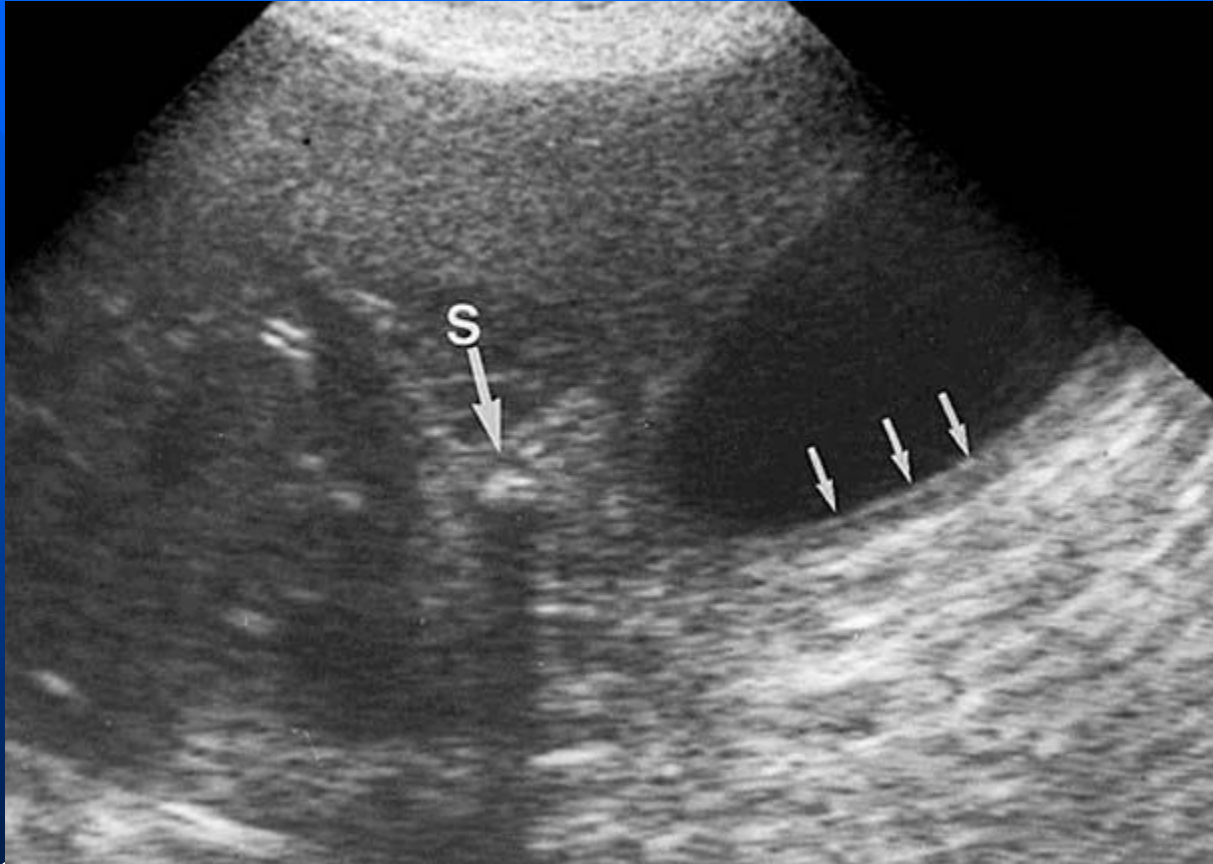
Clotted blood filling the entire gallbladder (G and arrows) has variable echogenicity

Milk of calcium bile



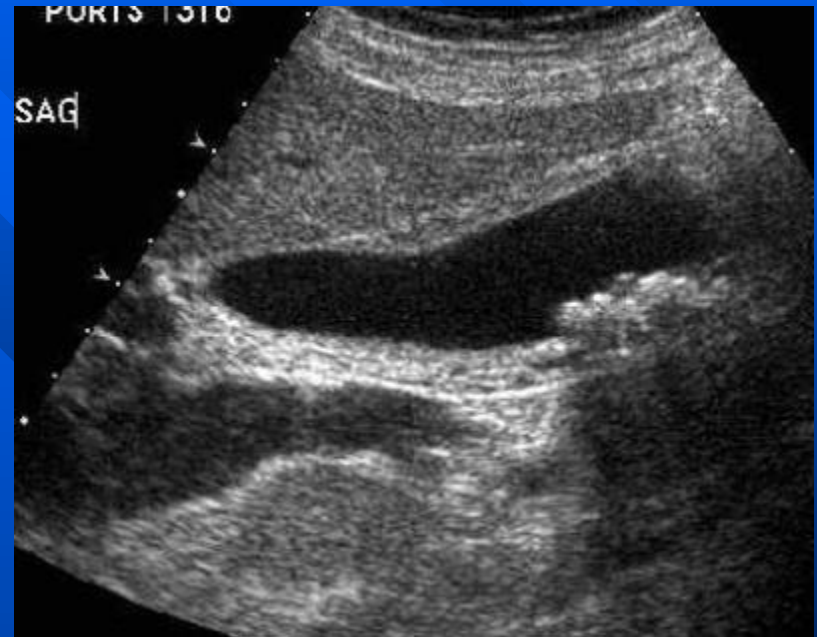
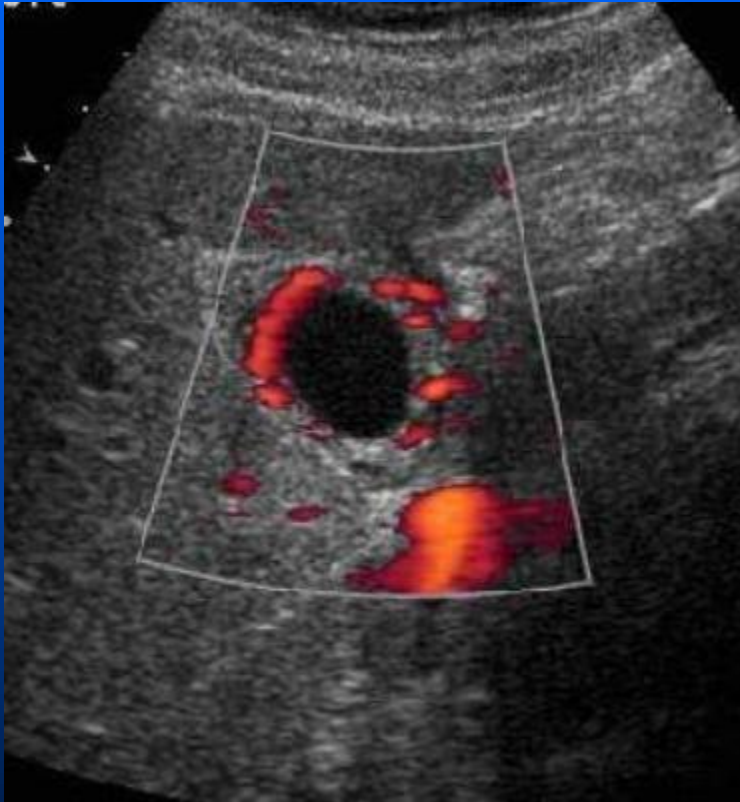
Milk of calcium bile appears as layering echogenic material (arrows) in the dependent portion of the gallbladder with associated acoustic shadowing

Acute cholecystitis



A stone (S) impacted within the neck of the gallbladder is seen with distal acoustic shadowing. Thickening of the gallbladder wall (arrows) in minimal

Uncomplicated acute calculous cholecystitis

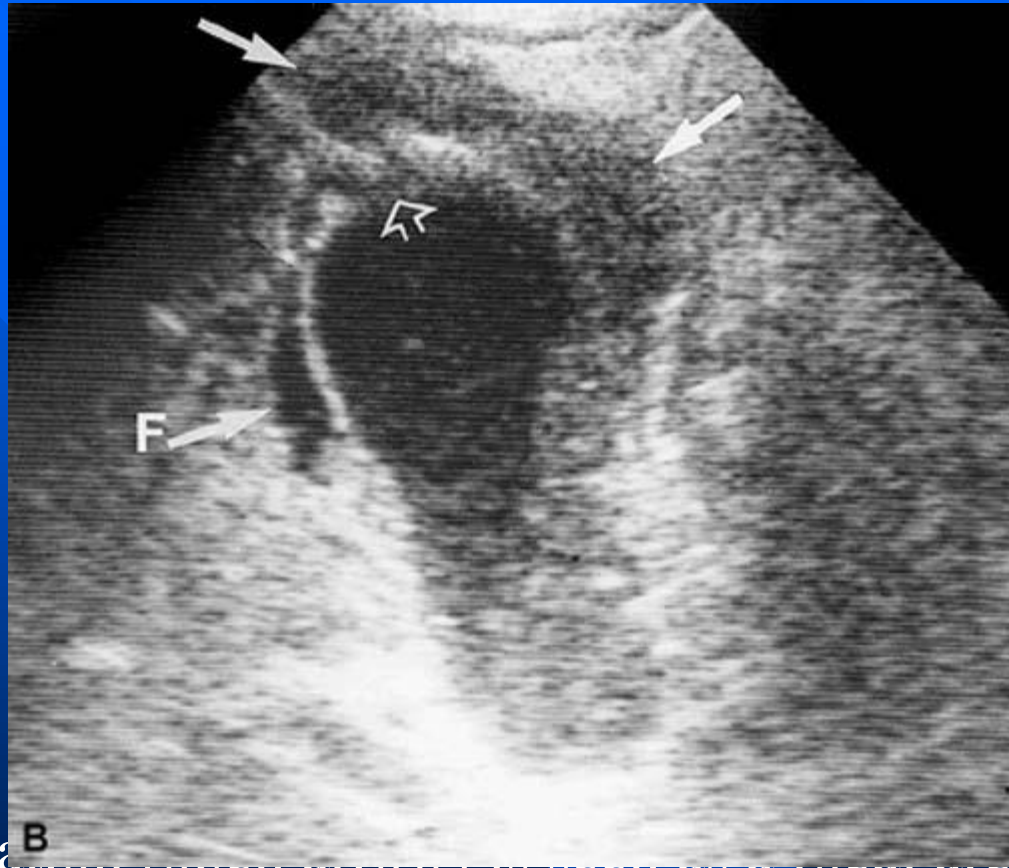


Gangrenous cholecystitis



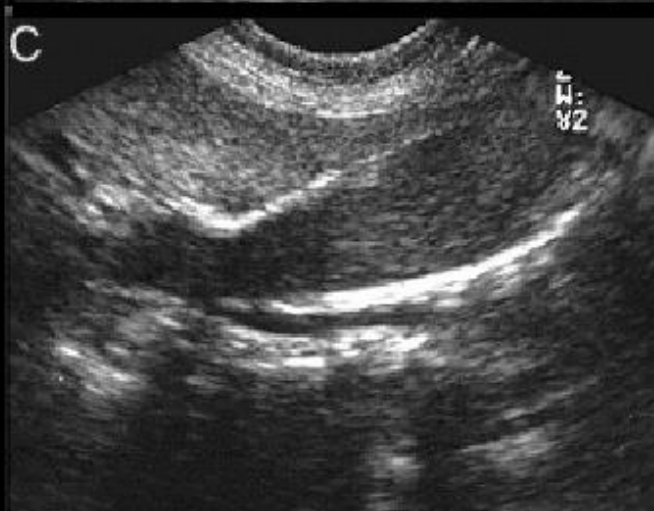
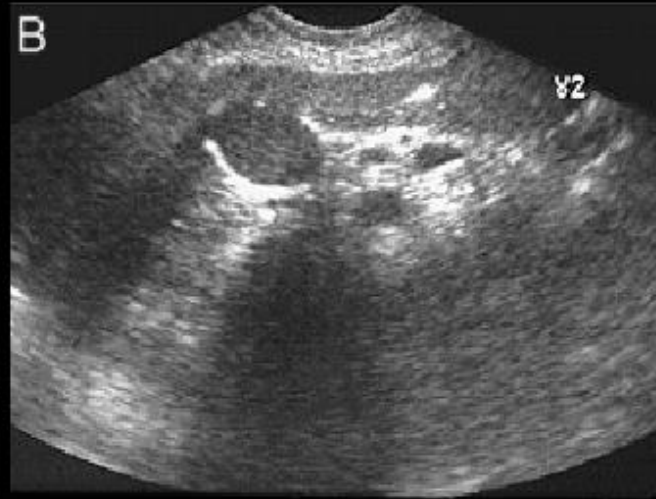
Intraluminal membranes (arrows) are seen secondary to strands of fibrinous exudates and desquamated mucosa. Diffuse thickening of the gallbladder wall is also visible. S, Stone in the neck of the gallbladder with distal

Perforation of the gallbladder

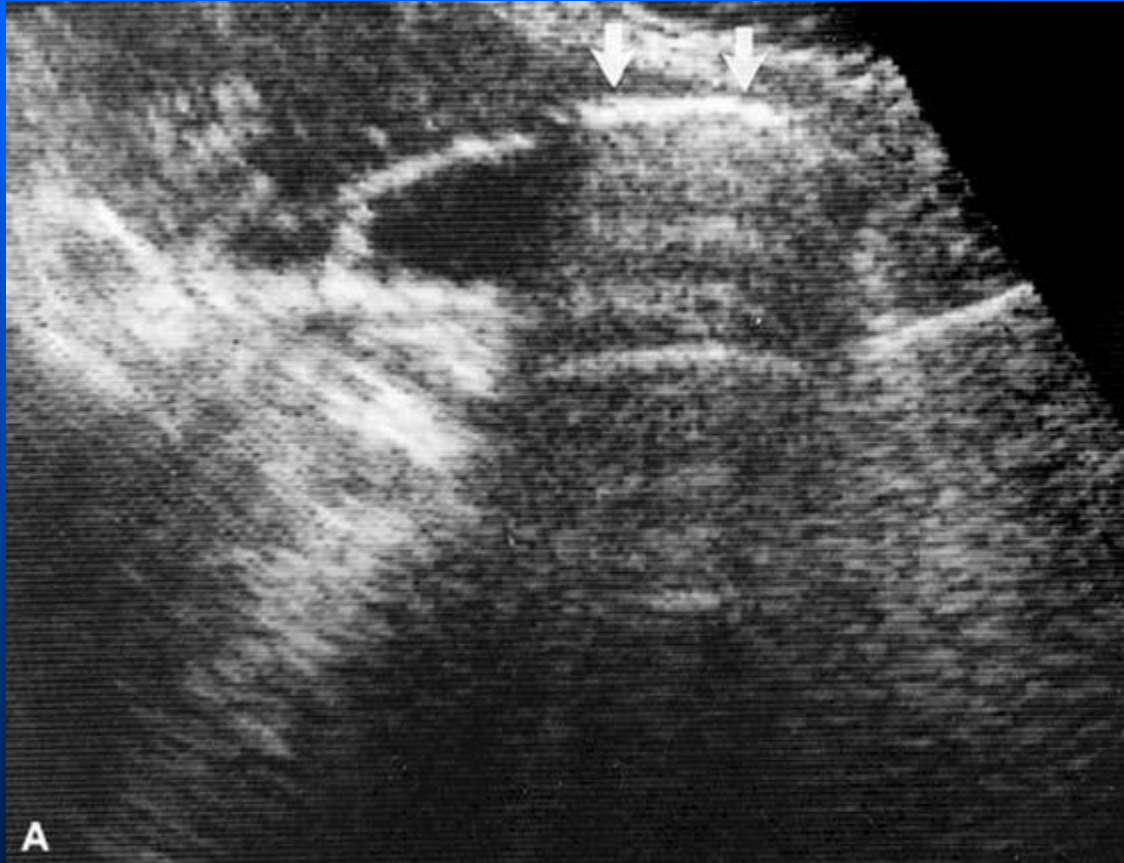


Site of perforation (open arrow) is seen as a focal area of disruption in the wall of the fundus of the gallbladder. A hypoechoic-echogenic area (solid arrows) around the fundus of the gallbladder represents a **pericholecystic abscess**. A localized pericholecystic fluid collection (F) is also visible.

Porcelain Gallbladder

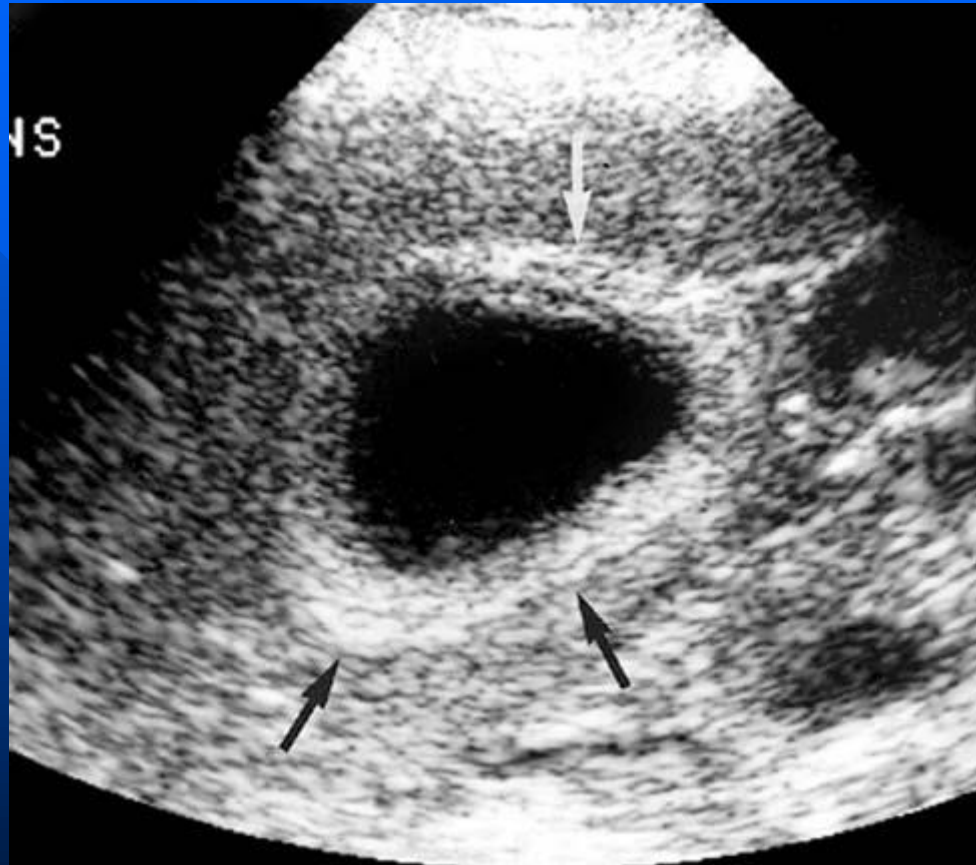


Acute emphysematous cholecystitis



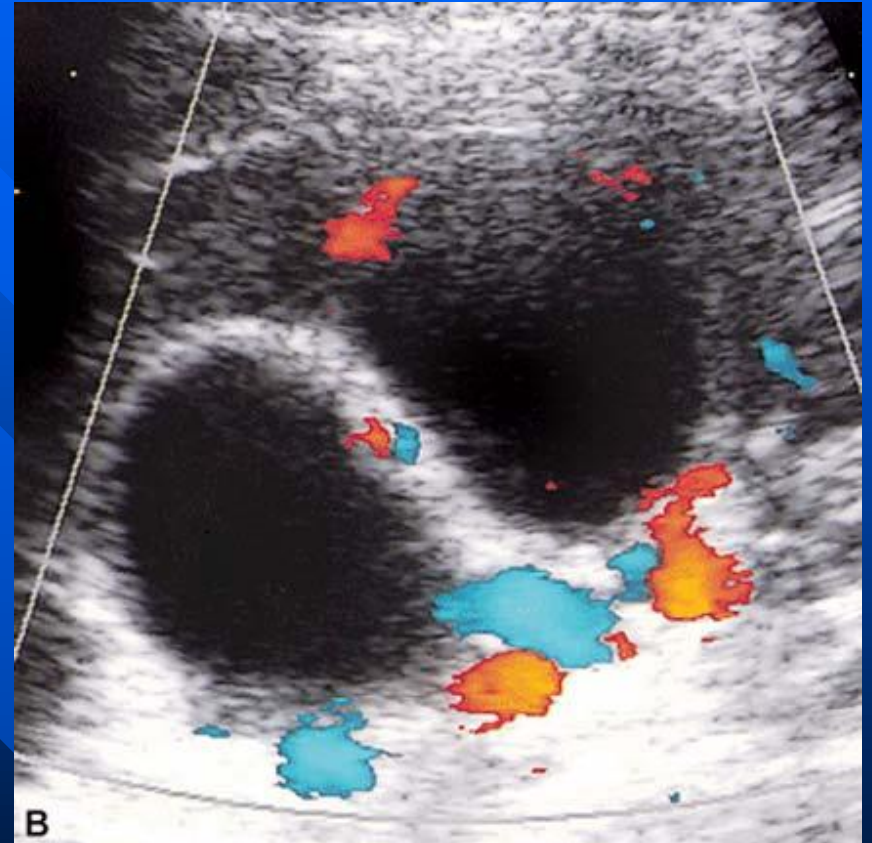
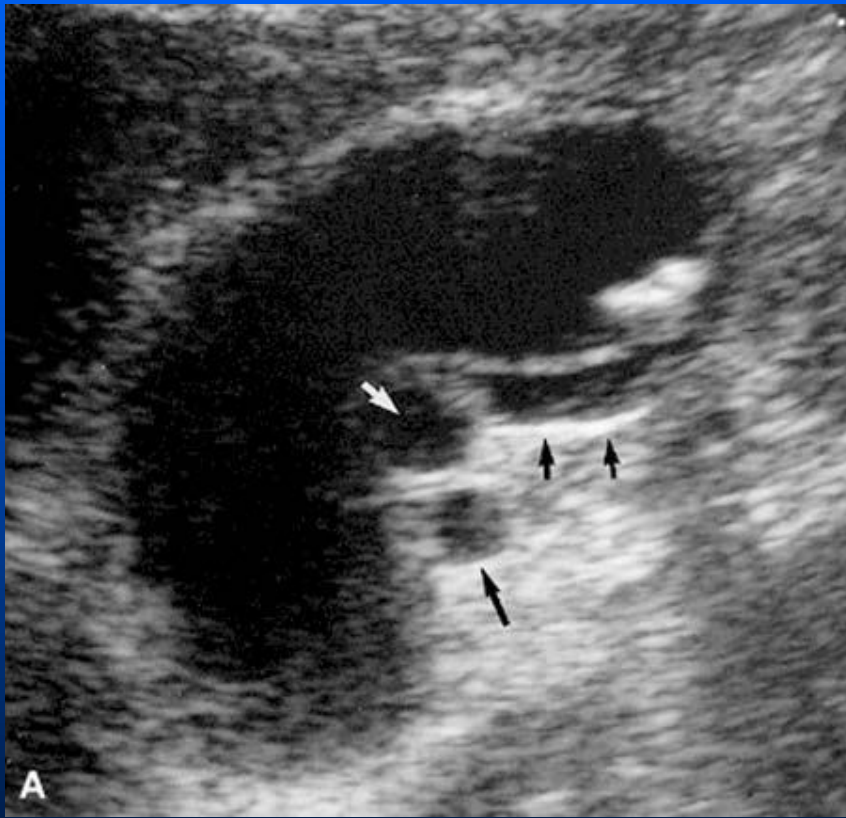
Gas in the gallbladder wall and lumen is seen as a linear hyperechoic area (arrows) with distal acoustic shadowing and reverberation artifacts.

Chronic cholecystitis



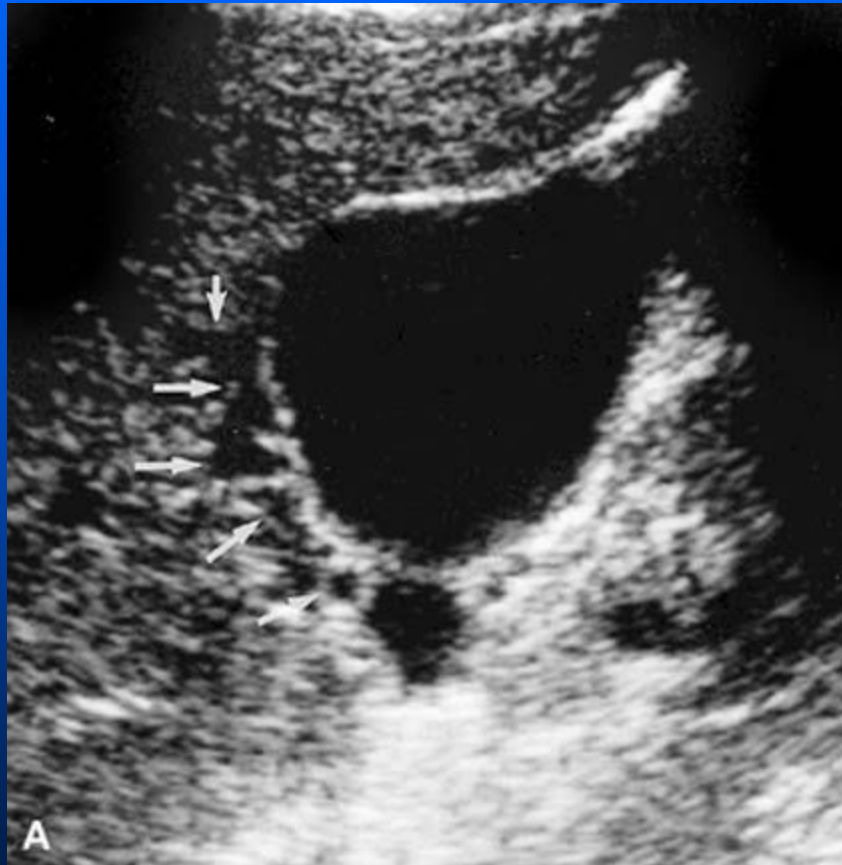
Gallbladder wall thickening: echogenic pattern. Diffuse echogenic thickening of the wall (arrows) in a patient with chronic cholecystitis

Gallbladder wall varices



Test

Gallbladder wall varices



- ◆ Seen with portal hypertension
- ◆ Usually associated with portal vein thrombosis