Case report

Xanthogranulomatous Cholecystitis: An uncommon variant

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Abstract:

Xanthogranulomatous cholecystitis is an uncommon inflammatory disease of the gallbladder contracted by focal or diffuse destructive inflammatory process with proliferative fibrosis and accumulation of lipid-laden macrophages. We represent a case in a 64 year old male who had a history of chronic abdominal pain, vomiting for last 1 year off and on. On Ultrasonography (USG), it was given as suggestive of chronic cholecystitis with cholelithiasis ? gall bladder neoplasm. He underwent open cholecystectomy. The histopathological diagnosis of xanthogranulomatous cholecystitis with cholelithiasis was made. We present this case for its clinical, radiological and histopathological findings. As this entity is uncommon and occasionally may resemble gall bladder carcinoma on clinical, gross and on radiology.

Keywords: Cholecystitis, Gall bladder, Xanthogranulomatous

Introduction:

Xanthogranulomatous cholecystitis is an unusual disease with an estimated incidence is about 1.5% of all the cholecystectomies studies¹. Clinically, Xanthogranulomatous cholecystitis resemble acute on chronic cholecystitis and may be difficult to differentiate it from gallbladder malignancies. The histopathology examination play important role in final diagnosis.

Case presentation:

A 65 years old male presented to our hospital with complaint of pain in abdomen on and off for last 1 year. Pain was in right upper abdominal quadrant, mild to moderate, colicky in nature. Associated history of constipation since one year with complaint of bleeding per rectum on defecation for last 6 months. He is a known case of hypertension and is on regular treatment. He consumes mixed diet. No other systemic illness was noted. Routine other investigations were within normal limit. On USG abdomen showed mildly dilated gall bladder with thickened wall and irregular nodular lesions. There was evidence of two large calculus approximately measuring 10x8 mm. Pericholecystic adhesions were noted. On USG suggestive of ?chronic cholecystitis with cholelithiasis or ?Gall bladder neoplasm. Other abdominal or pelvic organs were normal. No evidence of any lymphadenopathy or metastasis. Patient underwent open cholecystectomy and specimen sent for histopathological examination.

Gross: We received specimen of gall bladder totally measuring 5.5x3x2.5 cm. External surface was grey white, irregular with areas of congestion and adhesion on cut open showed mucin with two brownish black smooth surface gall stones measuring 1 cm in diameter. The wall of gall bladder
was thickened, mucosa was flattened with irregular submucosal nodules (fig-1).

**Microscopic:** Multiple sections showed wall of gall bladder with mucosal atrophy, focal ulcerations and at places formation of Rokitansky-Ashcoff sinus formation (fig-2). Areas of ceroid xanthogranuloma with foamy histiocytes in aggregates (fig-3) along with foreign body giant cells and lymphocytes were seen. Ares of fibroblastic proliferation and muscle hypertrophy was noted.

**Discussion:**
Although Xanthogranulomatous cholecystitis is well defined pathologically, it remains difficult to distinguish it from gall bladder cancer radiologically and macroscopically. Xanthogranulomatous cholecystitis is an uncommon form of chronic cholecystitis representing between 0.7% and 13.2% of gall bladder disease. It affects mostly women between 60-70 years old. Although the mechanism remain unclear, extravasation of bile into gall bladder wall with involvement of Rokitansky-Ascoff sinuses appears to be a precipitating cause. It is postulated that Xanthogranulomatous cholecystitis occurs due to rupture of Rokitansky-Ascoff sinuses with subsequent intramural extravasation of inspissated bile and mucin. This further attract histiocytes to phagocytosis. Patient normally present with right upper quadrant abdominal pain, vomiting, leucocytosis and a positive Murphy sign.

Our patient was a man having a history of worsening pain, vomiting for 1 year duration. On USG Xanthogranulomatous cholecystitis appears as moderate to marked thickening of wall of gall bladder and hypoechoic bands or nodules within it. Other associated finding includes mucosal disruption, stones, intrahepatic biliary dilatation or adhesions. In our case markedly thickened wall with nodular lesion and cholelithiasis was prominent. Few cause may show complication like perforation, abscess formation, fistula tracts or extension of inflammation to surrounding structures. Histopathologically, it consists of mixture of ceroid xanthogranuloma with foamy histiocytes, multinucleate foreign body giant cells, lymphocytes and fibroblastic proliferation. Polypoid growth, nodules, reactive fibroblastic proliferation and atypia were noted in few cases. Inflammation may extend to liver or transverse colon. In such cases on preoperative imaging of intraoperative findings. It remains difficult to differentiate xanthogranulomatous cholecystitis from gall bladder carcinoma.

**Conclusion:**
Xanthogranulomatous cholecystitis is a distinct clinicopathological entity which is important to diagnose as it is associated with various complications and possible confusion with gall bladder malignancy.
Fig-1: Gross photograph showing cut open specimen of gall bladder with thickened wall and two gall stones

Fig-2: Photomicrograph showing wall of gall bladder with focal ulcerations, formation of Rokitansky-Ashcoff sinus and muscle hypertrophy. (H&E stain, 100x)

Fig-3: Photomicrograph showing areas of ceroid xanthogranuloma -foamy histiocytes in aggregates (H&E stain, 400x)
References