

### Case Report

## XANTHOGRANULOMATOUS CHOLECYSTITIS- A MASQUERADE OF CARCINOMA GALL BLADDER

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### ABSTRACT

Xanthogranulomatous cholecystitis is an uncommon variant of chronic cholecystitis, it rarely involve adjacent organs mimicking advanced gall bladder cancer. Its coexistence with gall bladder cancer further complicates the issue. The diagnosis is usually possible after the histopathological examination of the specimen. We hereby report two cases of xanthogranulomatous cholecystitis which were misdiagnosed as cases of locally advanced carcinoma gall bladder and underwent radical resection. On pathological examination there was no evidence of malignancy in either case; xanthogranulomatous inflammation was seen infiltrating adjacent liver, duodenum. All the retrieved lymph nodes showed reactive hyperplasia. Till the time, a modality which can definitely diagnose xanthogranulomatous cholecystitis is available such cases should be dealt as malignant tumors keeping in view overall bad prognosis of carcinoma gall bladder and risk of potential complication in locally aggressive xanthogranulomatous cholecystitis.

**Keywords:** Xanthogranulomatous Cholecystitis, Gall Bladder Cancer, Radical Cholecystectomy

### INTRODUCTION

Xanthogranulomatous cholecystitis is a chronic inflammatory lesion of the gallbladder characterized by marked proliferative fibrosis and infiltration of the wall of gall bladder by macrophages and foam cells. Xanthogranulomatous cholecystitis, representing between 0.7 to 13.2% of gall bladder pathologies is an uncommon variant of chronic cholecystitis (Ross and Goodman, 1997). Although xanthogranulomatous cholecystitis is a well defined pathological entity, at times its differential diagnosis both radiological and clinically from gall bladder cancer is difficult (Spinelli *et al.*, 2006). There are few case reports of florid xanthogranulomatous cholecystitis exhibiting tumor like inflammation invading adjacent organs and tissues. We hereby report two cases of xanthogranulomatous cholecystitis presenting as advanced gall bladder cancer requiring extended resections.

### CASES

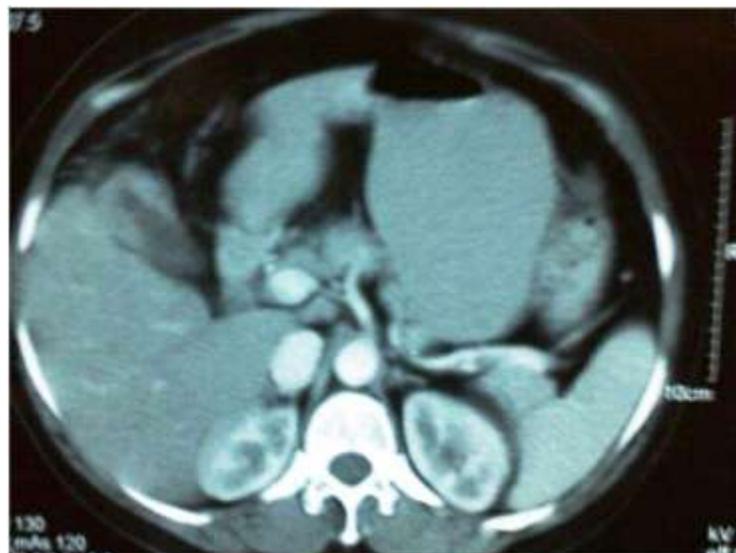
The first case is that of a 45 year old female, who presented with chief complaint of recurrent right upper quadrant pain for the last 3 months. Her clinical examination revealed no abnormality. Biochemical evaluation showed raised alkaline phosphatase = 199 (normal value 90-135 I U), rest of the investigations were within normal limits. Ultrasound abdomen showed thick walled gall bladder with multiple gall stones with infiltration into liver bed. Further evaluation with CECT scan revealed focal nodular thickening involving fundus, distal body, focal infiltration of fat plane between gall bladder and liver Figure 1. On the basis of radiological findings, diagnosis of locally advanced gall bladder carcinoma was entertained. Staging laparoscopy confirmed localized growth without intraperitoneal dissemination. Peroperative findings showed growth fundus and body of gall bladder infiltrating into adjacent liver tissue. Hepatic flexure, duodenal first part and omentum were closely abutting gall bladder growth. Hepatic artery lymph node and pericholedochal lymph nodes were enlarged in size. Extended resection i.e cholecystectomy, 2.0cm wedge of gall bladder bed resection, hepatoduodenal ligament lymphadenectomy was done. Her postoperative recovery was uneventful.

Second case is also a 45 years old female who presented with history of intermittent right hypochondrium pain for last 7-8 days. She had a long standing history of asymptomatic gall stones spanning many years. On clinical examination, there was palpable gall bladder mass; rest of the examination was within normal limits. Her biochemical evaluation was normal. Ultrasound abdomen showed a mass with dimensions 52

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x 50 mm in the gall bladder region with gall bladder not being separately defined from the mass. CECT scan revealed ill defined heterogeneously enhancing growth fundus and body of gall bladder infiltrating liver, pylorus and first part of duodenum with close abutment to hepatic flexure of colon Figure 2. Further evaluation with upper G.I endoscopy excluded mucosal involvement. Staging laparoscopy excluded dissemination. Operative findings revealed growth in gall bladder infiltrating liver, omentum, and first part of duodenum. Hepatic flexure of colon was abutting the growth. Hepatic artery and pericholedochal lymph nodes were enlarged. Extended Cholecystectomy plus partial excision of duodenal first part and feeding jejunostomy was done. She had uneventful postoperative outcome.

Histopathology in both cases was xanthogranulomatous cholecystitis with hepatic infiltration by chronic inflammatory and foamy macrophages. There was no evidence of malignancy or dysplasia Figure 3. All the retrieved lymph nodes showed reactive hyperplasia.

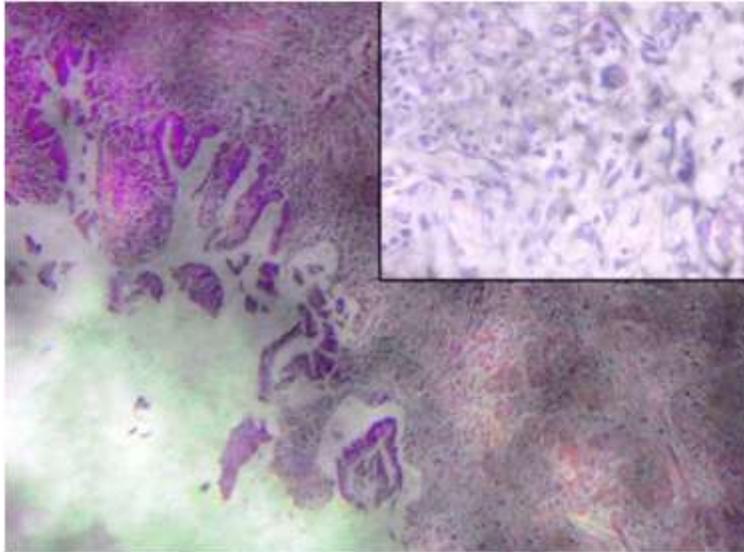


**Figure 1: CT-scan showing focal nodular thickening of gall bladder with loss of fat plane between gall bladder and liver**



**Figure 2: CT scan showing enhancing growth gall bladder infiltrating liver, pylorus and first part of duodenum**

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**Figure 3: Microphotograph showing lining of gall bladder with inflamed submucosa. The inset shows foamy macrophages and a giant cell. [H & E 400 X]**

### DISCUSSION

Xanthogranulomatous cholecystitis is a rare form of cholecystitis. It commonly affects middle and old age individuals (Guzman-Valdivia, 2005; Cardenas-Lailson *et al.*, 2005). Both the present cases were in 5<sup>th</sup> decade of life. There is no specific signs and symptoms, it generally presents as acute or chronic cholecystitis (Reano, 2005). 80 to 90% cases of xanthogranulomatous cholecystitis are associated with gall stones. The exact pathogenesis of xanthogranulomatous cholecystitis is still unclear. However it is widely accepted that intramural extravasation of bile from ruptured Rokitansky- Aschoff sinuses results in inflammatory reaction that transforms into granulomatous inflammation resulting in xanthogranulomatous cholecystitis (Goodman and Ishak, 1981).

Although xanthogranulomatous cholecystitis is not an exceptional pathology involvement of extra gallbladder organs is rare (Spinelli *et al.*, 2006). Due to involvement of adjacent organs it is difficult to differentiate florid xanthogranulomatous cholecystitis from gall bladder cancer radiologically as well as intraoperatively. To complicate the matter further xanthogranulomatous cholecystitis is coexistent with carcinoma gall bladder in 12% cases (Benbow, 1989), though its role as a causative agent in gall bladder malignancy is not clear (Gosh, 2011). In view of this fact, such cases often require extensive surgery with the risk of potential morbidity and mortality for seemingly benign disease. Many authors studied the role of radiology in distinguishing xanthogranulomatous cholecystitis from gall bladder cancer (Chun *et al.*, 1997, Iannicielli *et al.*, 2002). Characteristic feature on CECT scan such as intramural hypodense nodules, pericholecystic hypodense shadow has been described. However these characteristic findings may not be consistent in patients with xanthogranulomatous cholecystitis (Parra *et al.*, 2000). In both the present cases, radiological features described in xanthogranulomatous cholecystitis were absent. Role of FNAC from gall bladder has also been described in preoperative diagnosis of xanthogranulomatous cholecystitis (Susumu H *et al.*, 2010). Certainly it has place in inflammation restricted to gall bladder because simple cholecystectomy alone will suffice in such cases. Similarly intraoperative frozen section to differentiate xanthogranulomatous cholecystitis from gall bladder malignancy has also been described. However in case of extensive xanthogranulomatous cholecystitis it is unlikely to change operative strategy of wider resection, first to treat symptoms like jaundice, bowel obstruction or prevent potential complications like perforation, second risk of coexistent malignancy cannot be excluded with certainty (Houstan, 1994).

In conclusion, the two case reports reiterate the fact that preoperative and intraoperative differentiation of xanthogranulomatous cholecystitis from gall bladder cancer remains a challenge. In cases of

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xanthogranulomatous cholecystitis involving adjacent organs radical resection is required with the risk of potential morbidity.

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