Case Report

Xanthogranulomatous Cholecystitis Mimicking as Gallbladder Carcinoma: A Caution for Hepatobiliary Surgeon

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Abstract

Background: Xanthogranulomatous Cholecystitis (XGC) is a destructive inflammatory process of the gall bladder which can rarely extend into neighboring structures mimicking advanced carcinoma of the gall bladder. To the best of our knowledge six such cases have been reported in medical literature in which Xanthogranulomatous cholecystitis had lead to involvement of surrounding structures. Preoperative diagnosis of such a lesion remains difficult and most of such cases are diagnosed postoperatively following resectional surgery.

Case Presentation: A 40 years old lady was admitted with the clinical picture of cholecystitis and gastric outlet obstruction. Ultrasonography showed gall stones with pericholecystic collection communicating with GB lumen. CT scan showed a mass arising from gallbladder with pericholecystic fluid with gross distension of the stomach. LFTs, CEA and CA 19-9 levels were within normal limits. Endoscopy of the stomach showed an apparently non-epithelial rounded mass projecting into gastric lumen causing partial obstruction of the gastric outlet. On exploration, a firm mass involving gallbladder and stomach was identified for which en-bloc extended cholecystectomy and Billroth-II gastrectomy was performed. Histopathology of the specimen revealed XGC with secondary involvement of pylorus of the stomach.

Conclusion: Given the rarer preoperative diagnosis of XGC, which morphologically and radiologically mimics carcinoma, such cases should be managed aggressively. A brief literature review has also been discussed.

Keywords: Xanthogranulomatous cholecystitis (XGC); Gall Bladder (GB); Gall bladder carcinoma

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Consent: Consent was taken from the patient for publication of this case report.

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Introduction

Xanthogranulomatous Cholecystitis (XGC) is relatively rare form of cholecystitis which presents with extensive chronic local inflammatory process leading to involvement of the surrounding viscera [1, 2]. Morphologically it resembles the malignant lesion and clinically or radiologically it cannot be differentiated from malignancy [1-3]. Attempted endoscopic or CT guided biopsy of the lesion is often inconclusive [4]. Hence preoperatively it becomes almost impossible to exclude malignancy and these lesions are treated as malignancy [5-8]. Fortunately later these lesions prove to be inflammatory with an excellent prognosis. In Far East the incidence of this disease is 1.8% in resected gall bladder specimens, however generally such lesions are uncommonly diagnosed in Western, African and central Asian populations [6].

Here we present such an advanced case of XGC presenting with gastric outlet obstruction. To the best of our knowledge we have not encountered any such case in the history of medical literature.

Case Report

A 40 years old lady with no known co-morbidity presented in with the complaints of mild, dull pain in right hypochondrium for last 2 months along with vomiting for last 7 days. Patient had anorexia but lost 5 kg weight in this period. On local examination patient had mildly tender right hypochondrium with an irregular mass extending upto epigastrium. USG report showed distended GB filled with multiple stones along with a pericholecystic collection communicating with GB lumen. Stomach was moderately distended filled with fluid contents with possible obstruction at gastric outlet that was confirmed at endoscopy. Endoscopy of stomach also revealed a globular mass projecting into the stomach causing partial gastric outlet obstruction. Endoscopic biopsies were inconclusive. Baseline investigations showed ESR-90mm/hour (reference range 10-20), Hb-10.9G/dl (reference range 12-16), TLC-7600/uL (reference range 4000-11000), and normal LFTs. CEA and CA19-9 levels were within normal limits. CT abdomen and pelvis was done that showed a 92x69mm bi-lobed thick walled obstructing cystic lesion with pericholecystic fluid causing antral obstruction.

Figure1 CT Scan shows complex gallbladder mass (a,b) externally compressing the antrum to cause gastric outlet obstruction. Figure ‘c’ in inlet shows the gastroscopic image of the mass projecting into the stomach.

Figure2 Per-operative image of the GB mass involving pylorus of stomach. Lower image shows the resected specimen following extended cholecystectomy and Billroth-II Gastrectomy.
Patient was prepared for surgery with provisional diagnosis of GB Carcinoma (Stage IV). Surgical exploration revealed gall bladder mass extending upto antrum of the stomach mimicking advanced carcinoma gall bladder. Surgical resection of gall bladder (Extended Cholecystectomy) done along with Billroth Type II Gastrectomy.

The specimen was sent for histopathology that unexpectedly showed it to be Xanthogranulomatous cholecystitis with secondary involvement of the stomach. No granuloma or malignancy was appreciated. Figure 3 shows the histological picture of the resected specimen with clear findings of xanthogranulomatous inflammation. The post operative period remained uneventful and the patient fully recovered.

**Figure3** (A & B) Low power view of the tumor containing XGC; (C&D) High power fields view showing multiple foam cells and histiocytes without evidence of malignancy.

**Disscussion**

Around 1% of the cholecystectomies done for gallstones are reported to have Xanthogranulamtous cholecystitis (XGC) [1-2] which likely results from the extravasation of the bile into the gallbladder wall and involvement of Rokitansky-Aschoff sinuses [2]. Pathologically, XGC is characterized by formation of multiple yellowish nodules within the gallbladder wall containing mixed inflammatory cells and abundant foams cells [2]. In majority of the cases the inflammation is confined to gallbladder alone and the cholecystectomy remains the operative intervention of choice [1-2]. In rare cases the inflammatory process exceeds its confines and involves the surrounding structures especially duodenum, colon, stomach or pancreas and the preoperative diagnosis of the identified mass becomes difficult [5-8]. To the best of our knowledge 6 such cases have been reported previously in the medical literature in which XGC involved the surrounding structures to be misinterpreted preoperatively as a case of gall bladder cancer [9]. Additional
extended resections in form of extended hepatic resections and pancreaticoduodenectomies or Whipple resections are required with provisional diagnosis of malignancy in these cases which may be avoidable if we know that the primary process is benign [5-10].

Various radiological investigations including US, CT scan and MRCP/ERCP have been previously employed to analyze such masses but these investigations do not reliably identify the primary site of the tumor origin and the diagnostic dilemma lingers on till the resection is done [4, 11]. US reported findings pertaining to this particular disorder still remain non-specific and unreliable. Hyperechoic gallbladder wall and presence of intraluminal hypoechoic nodules have been reported in 35-73% of the cases but these findings have not been found consistently and are not reliably differential. Similarly the finding of the pericholecystic fluid does not appear to be specific either [4, 11]. CT scan and MRCP may provide the better realization of local spread of mass but it does not reliably define the actual site of the primary and neither have they defined the benign nature of the lesion.

Tumor markers like CA 199.9 may or may not be elevated in cases of the XGC as per Adachi et al [10] and thus may not be useful in the differentiating malignancy from the XGC. Extent of the involvement of the surrounding structures does not affect the levels of CA 19.9 or CEA levels either. Intraoperative frozen sections have been proposed for the excluding malignancy but rarity of the condition adds extra financial burden and hence majority of the hepatobiliary surgeons would believe that resection should be radical. Secondly, there is no way of excluding the concomitant presence of XGC and cancer without extended resection [5-8, 10, 11-14]. In selected patients with high suspicion of XGC frozen section can be employed and major resection may be avoided [7].

In conclusion, preoperative or intra-operative diagnosis of XGC from gallbladder carcinoma remains a dilemma especially for the hepatobiliary surgeon, especially in patients with extensive involvement of surrounding organs. We favor radical resection as preoperative and per-operative complete exclusion of the malignancy remains difficult and extended radical resections remain the choice. Intra-operative frozen sections may avoid few radical resections.

Reference