Case Report

XANTHOGRANULOMATOUS CHOLECYSTITIS: A PSEUDO TUMOR SIMULATING GALLBLADDER CARCINOMA

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ABSTRACT

We present 60 years old female with signs and symptoms of cholelithiasis, reinforced by the ultrasonic and CT imaging findings suggestive of the presence of gallstones. She underwent open cholecystectomy with roux en y reconstruction because of dense adhesions all around which resulted in CBD injury, quite resembling carcinoma gallbladder. To our surprise, the specimen histopathology came out to be Xanthogranulomatous cholecystitis

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INTRODUCTION

Xanthogranulomatous cholecystitis is a rare, benign inflammatory disease of the gallbladder, significant for mimicking gallbladder carcinoma making difficult pre-operative and intra-operative diagnosis. Previously considered a variant of chronic cholecystitis, it is now considered a separate clinical entity[1]. It represents about 0.7 to 13.2% of all cholecystectomies done for non-malignant diseases of the gall bladder[2]. Some studies found no gender predilection[3] and others report females being more commonly affected[4]. The age of presentation averaging at 51.6 years[5]

CASE PRESENTATION

60 year old female presented to our hospital on 10th February 2018 with a 06 months history of pain right upper quadrant, nausea and bloating. The pain being intermittent, colicky in nature, aggravated by certain foods and temporarily relieved by medication. 06 months previously, she had a stone in CBD, which was successfully removed with ERCP, without going through cholecystectomy. Now presented with the same above complaints. Her general physical examination and abdominal examination were unremarkable. Laboratory studies on admission showed a white cell count 6600/mm^3, hemoglobin=10.5g/dl, total bilirubin=0.58mg/dl, ALT=21.3U/L and Alkaline phosphatase=160U/L. Coagulation profile were PT 16 seconds (13 seconds control) and APTT 34 seconds (33 seconds control). Blood urea=10.4 mg/dl and creatinine=0.44mg/dl. Random blood sugar=107.3mg/dl. Serum electrolytes were; sodium=144mmol/L, potassium=4mmol/L and chloride=107mmol/L. Ultrasound showed diffuse thick walled gallbladder with 20mm stone (Figure 1). CT scan showed thick walled gallbladder with 20mm stone, anill-defined interface with liver parenchyma and surrounding structures (Figure 2). CA 19-9 levels were within normal range (0 to 37U/ml). After informed written consent, open cholecystectomy was performed where the gallbladder and liver were found to be adherent to the greater omentum and the gut with dense adhesions. The gallbladder mass, intra-operatively considered malignant, was removed (Figure 3). Dissection was difficult and iatrogenic injury to common hepatic duct below the confluence occurred, for which a Roux-en-Y loop was made and hepaticojejunostomy was done. Gallbladder specimen was sent for a biopsy.Histopathological examination of the gallbladder specimen revealed gallbladder infiltrated by dense acute and chronic inflammatory cells and foamy histiocytes (figure 4). A diagnosis of ulceration with Xanthogranulomatous cholecystitis was made with no evidence of malignancy. The patient was discharged on postoperative day 10 without complications.

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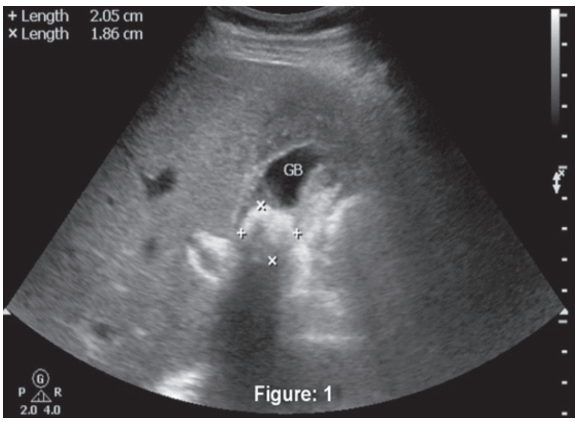
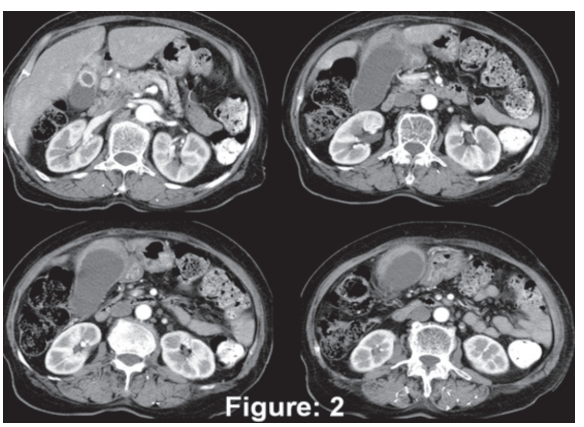


Figure: 1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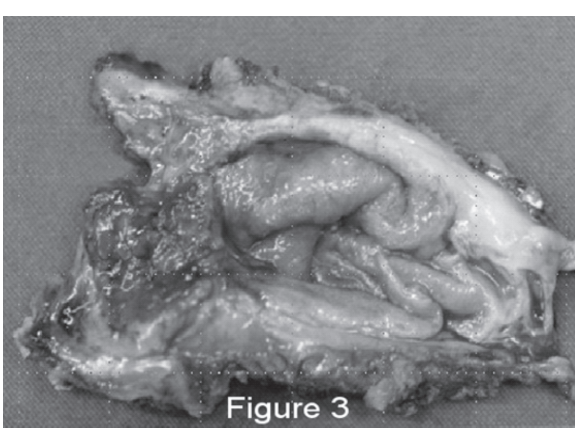
Figure 3

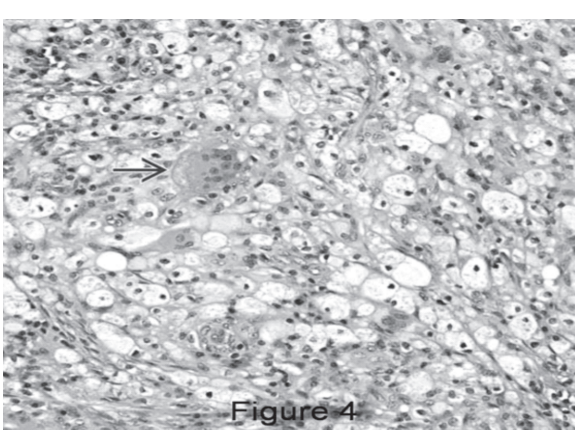
Figure 4

DISCUSSION

The pathogenesis of Xanthogranulomatous cholecystitisis postulated to be because of seepage of bile into the gallbladder wall, either due to ruptured Rokitansky-Aschoff sinuses or as a result of a rise in intraluminal pressure due to impacted gallstones[6]. Most patients complain of symptoms similar in presentation to biliary colic or acute cholecystitis. Some patients may present with a mass in the right upper quadrant, simulating carcinoma gallbladder. Others suffer from obstructive jaundice due to choledocholithiasis or secondary to a biliary tract obstruction extrinsically (Mirizzi syndrome) [7]. In other case studies a few patients of Xanthogranulomatous cholecystitis showing choledocholithiasis on ultrasonography examination or MRCP underwent ERCP with sphincterotomy and stone extraction, similar to our case[7, 8]. Other studies also showed biochemical and hematological tests to be within normal range such as in our case, except for raised liver enzymes and bilirubin in jaundiced patients and leukocytosis in those presenting with acute cholecystitis[7]. According to some researchers, tumor marker CA 19-9 may be helpful in differentiating Xanthogranulomatous cholecystitis, a benign condition from gallbladder cancer, as elevated levels are often indicative of pancreatic biliary malignancy. This is postulated to help in the presence of confusing imaging studies and intra-operative findings, as it is not commonly elevated in the former [9]. However, other case studies found CA 19-9 unhelpful in differentiating between benign and malignant conditions of the gallbladder[10].

Pre-operative diagnosis can be facilitated by imagining studies including ultrasonography examination and CT scan findings. Ultrasound most commonly reveals thickening of the gallbladder wall, presence of stones and hypoechoic nodules reflecting the formation of xanthogranulomas which is considered to be a characteristic finding on this modality of imaging[11]. Thickened gallbladder wall and presence of stones confuses the picture in favor of chronic cholecystitis[12]. CT scan displays thickened gallbladder wall as well, but also shows involvement of the surrounding soft tissues and effacement of fat planes much better as compared to ultrasound imaging. The presence of gallstones is a common finding in XGC[13]. Another method to diagnose XGC includes fine needle aspiration cytological study. Chandra S et al categorized FNA findings from cholecystectomy specimens and placed lesions giving a picture of XGC in a category that would require a repeat FNA sample or surgery because of difficulty in concluding it entirely benign (14).Taking a frozen section sample is considered to be the best way of differentiating between XCG and GBC and thus avoid extensive surgery for a XGC[9]. Whether cholecystectomy undertaken for a lesion where the surgeon is unsure about the nature of the pathology, should be attempted laproscopically or open, a study revealed that focal thickening of gallbladder

wall, involvement of lymph nodes, and elevated CA 19 9 levels were in favor of doing open surgery, considering these features indicate a higher possibility of dealing with gallbladder cancer. Laparoscopic surgery is favored because of a comparatively short operation time and postoperative recovery time[9]. Laparoscopic cholecystectomy has a higher conversion rate when done for cases of XGC as compared to other benign pathologies of the gallbladder[15]. It is necessary to completely resect the gallbladder to exclude possibility of malignancy and is also the best treatment of choice[13]. However, surgical dissection in cases of XGC is difficult due to inflammation around gallbladder and bile ducts as has been reported in many cases and was also encountered in our case. Intra-operative frozen section can aid in figuring out a proper strategy of operation and help minimize the need for unnecessary extended resections[3]. In all cases of XGC, identification was achieved by histopathological examination being the gold standard[2, 3].

CONCLUSION

XGC is a rare disease in which suspicion of carcinoma GB should be fully investigated and oncological workup done. Open cholecystectomy should be the treatment of choice with a final say of histopathology to reach a definitive diagnosis.

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Mabood W: Concept, Drafting, Manuscript, Proofreading.

Arshad W: Manuscript. Bibliography.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.