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Case Presentation

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When Inflammation Masks Malignancy: Gallbladder Cancer Misdiagnosed as Xanthogranulomatous Cholecystitis

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Abstract

Background: Xanthogranulomatous cholecystitis (XGC) is a rare, chronic inflammatory condition of the gallbladder that can clinically and radiologically mimic gallbladder carcinoma (CaGB), often leading to diagnostic dilemmas. The definitive diagnosis of XGC relies on histopathological examination, which reveals characteristic foam cells and fibrosis. Although the co-existence of XGC and CaGB is uncommon, it poses significant misdiagnosis.

Case report: We report a case of a 48-year-old female who was preoperatively diagnosed with gallbladder carcinoma based on clinical and radiological findings. She underwent an open radical cholecystectomy with hepatic wedge resection. Histopathology revealed features of XGC without malignancy. However, six months postoperatively, she presented with recurrent symptoms and was found to have an adenocarcinoma at the gallbladder fossa on imaging and fine-needle aspiration cytology.

Conclusion: This case highlights the diagnostic challenge in differentiating XGC from CaGB and the potential for missed malignancy. Given the clinical overlap and possibility of co-existent carcinoma, we recommend that histopathological evaluation of suspected XGC cases be reviewed by at least two experienced pathologists to avoid under diagnosis and ensure appropriate treatment.

Keywords: Xanthogranulomatous cholecystitis; Carcinoma gall bladder; coexistence

Introduction

Xanthogranulomatous Cholecystitis (XGC) is an uncommon type of a chronic cholecystitis [1] which occurs due to the entry of bile within GB wall via surface ulcers or ruptured Rokitansky-Aschoff sinuses [2], leading to initiation of an intense local inflammation producing a GB lump. This makes preoperative differentiation of XGC from carcinoma GB difficult, both clinically as well as radiologically (USG and CT Scans) [2,3]. Hence, XGC is diagnosed accurately on histopathology only [4]. Microscopically, there are infiltrations of inflammatory cells including lipid laden macrophages called "Foam Cells" and fibroblasts inside GB wall [5,6]. Co-existence of XGC and carcinoma GB can occur but it is not a common entity [1,3]. A global incidence of XGC is 1.3-1.9%, except in India, where the incidence is higher (8.8%) [3]. Since pre-operative presentation of XGC and carcinoma GB is similar both clinically and radiologically, this has led to either over or under diagnosis of carcinoma GB. This confusion of over/ under diagnosis has led to 10.2% patients receiving over/ under treatment [2]. The co-existence of XGC and Carcinoma GB has been found although uncommon. Incidence of carcinoma GB associated with XGC varies from 5.1-5.9% [3].

Case Presentation

We herein report an uncommon case of a 48 years old female, who was diagnosed preoperatively as a case of carcinoma gall bladder (clinically and radiologically), underwent open radical cholecystectomy with hepatic wedge resection. Biopsy was reported as XGC (with no evidence of concomitant malignancy). Immediate post operative period was uneventful and she was discharged on post operative day 8. During follow-up visits, after 5-6 months she developed right upper abdominal pain and jaundice. On evaluation using CT scan there was an evidence of a mass lesion in the area of GB fossa through which EUSG guided FNAC was taken which was suggestive of adenocarcinoma **(Figure 1)**.

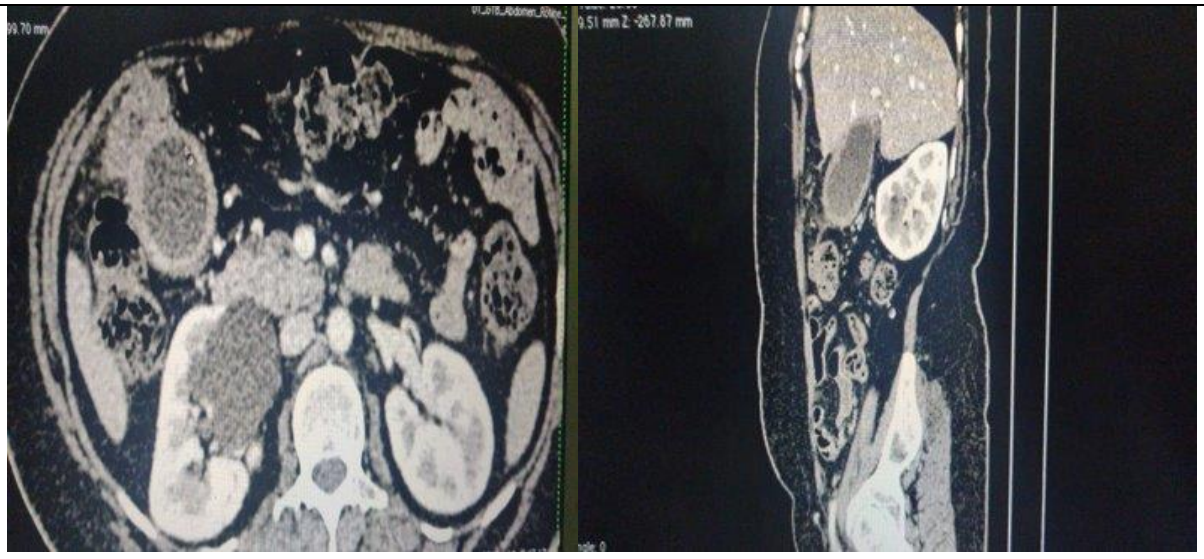

Figure 1: illustrating GB mass abutting segment V of liver.

Conclusion

Co-existence of XGC and carcinoma gall bladder can be missed and can lead to under diagnosis and inappropriate treatment of carcinoma gall bladder. Hence we recommend that evaluation of specimen by two different experienced pathologists should be

done before making a diagnosis of an isolated XGC.

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