

CASE REPORT

A Case Report on Eosinophilic Cholecystitis with Frozen Calot's Triangle – A Rare Inflammatory Etiology Affecting Gallbladder

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ABSTRACT

Eosinophilic cholecystitis is regarded as there are presentation of gallbladder infection that has similar presentation as acute cholecystitis. It presents with symptoms similar to that of cholecystitis with infiltration of excessive eosinophils within the gallbladder. Eosinophilic cholecystitis can occur alone or most of the times in combination with eosinophilic inflammation gastrointestinal tract and rarely associated with inflammation of airway.

Keywords: Eosinophilic cholecystitis, Inflammation, Gallbladder

INTRODUCTION

Eosinophilic cholecystitis is a uncommon and poorly understood condition which was first reported by Albot et al [1]. The etiological factors causing eosinophilic cholecystitis are still unclear. But it is studied to have frequently associated with diseases such as hypereosinophilic syndrome, eosinophilic-myalgia syndrome, certain drugs and parasitic infestations (such as ascariis, clonorchis sinensis and hydatid cyst) [2]. It has been studied that eosinophilic cholecystitis can be associated with eosinophilic gastrointestinal tract inflammation such as eosinophilic gastroenteritis, eosinophilic cholangiopathy, eosinophilic granulomatous hepatitis, eosinophilic ascites and sometimes eosinophilic granulomatosis with polyangiitis closely associated with airway inflammation. The presentation of these patients is usually similar to that of cholecystitis and the treatment is cholecystectomy, however other associated causes must be treated simultaneously if it is associated with eosinophilic cholecystitis.

CASE REPORT

A female patient aged 60 years came with complaints of abdominal pain for 10 days which was continuous in nature and bilious vomiting of 4 episodes per day for 2 days. On abdominal examination tenderness was present in right hypochondrium and epigastrium. Ultrasound abdomen was done and it revealed enlarged gallbladder with immobile calculus measuring 22.8mm close to neck of gallbladder, gallbladder wall is thickened and measures 9.1mm, pericholecystic fat stranding and fluid collection was seen and features suggested of calculus cholecystitis (Fig.1). Initially patient was managed conservatively with antibiotics and analgesics and was planned for interval cholecystectomy. Hence patient was discharged and was readmitted after 6 weeks, her total leukocyte count was 9000, eosinophil count was

3% and in her liver function tests alkaline phosphatase was 169 and gamma GT was 121, all other liver parameters were within normal limits. Fitness was obtained and the patient was taken up for elective laparoscopic cholecystectomy.

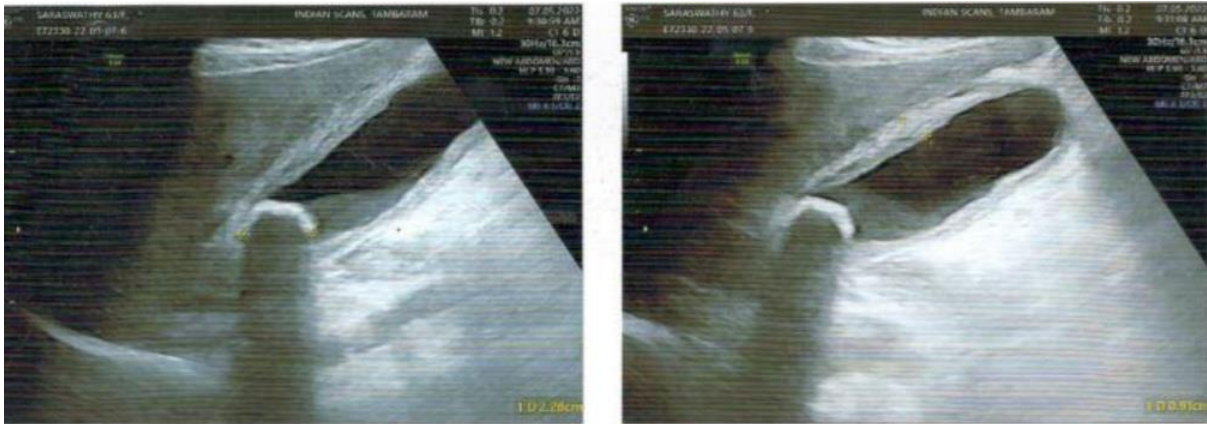


Fig.1: USG showing enlarged gallbladder with wall thickening

Under general anaesthesia laparoscopic cholecystectomy was proceeded by open Hasson method and routine inspection was done and the gallbladder was found to be inflamed and edematous with omental adhesions surrounding the gallbladder. As there was a frozen Calot's triangle due to fibrosis of gallbladder, there was difficulty in clearly identifying the vital structures around the gallbladder, hence laparoscopic procedure was abandoned and was proceeded with open cholecystectomy. The gallbladder was identified and attempts were made to identify Calot's triangle anatomy, but due to firm adhesions, Calot's triangle could not be identified and hence subtotal cholecystectomy was done (Figs 3,4) and drain tube was placed. Postoperative period was uneventful and patient was managed with adequate analgesics and antibiotics and was sent home on postoperative day 6. Interestingly histopathological report revealed extensive transmural fibrosis with dense eosinophilic infiltrate in lamina propria of gallbladder specimen.



Fig. 2: Intraoperative visualisation of gallbladder with frozen calot's triangle
Fig. 3: Dissection of gallbladder from GB fossa

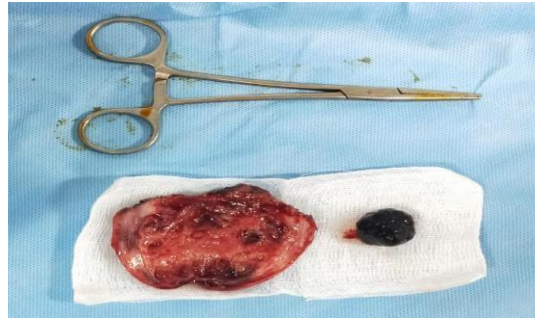


Fig. 4: Excised specimen of gallbladder with stones

DISCUSSION

Eosinophilic cholecystitis being a rare variant of cholecystitis has prevalence of 0.25-6.4% across the globe with average presentation around 37 years of age [3-5]. In a study conducted in northwest region of Rajasthan out of 867 specimens 15 was diagnosed as eosinophilic cholecystitis [6]. The multiple etiological factors proposed that include local reaction to parasite or bile, localized allergic reaction to substances released at foci of inflammation or gall stone impacted at neck [7,8]. Certain medications like cephalosporin, erythromycin and herbal medicines is also believed to be etiological factors of eosinophilic cholecystitis [5,9]. Imaging findings in eosinophilic cholecystitis is similar to cholecystitis. Eosinophilic cholecystitis has good prognosis and it can be treated by performing simple cholecystectomy. There is no specific clinical presentation for eosinophilic cholecystitis and histopathology remains the mainstay for the diagnosis of eosinophilic cholecystitis, however sometimes it can be associated with other inflammatory conditions like eosinophilic granulomatosis with polyangiitis which can be treated by corticosteroids with immunoglobulin therapy if needed. In a study by Kuwahara et al stated that Galectin-10 also known as Charcot Leyden crystal protein correlates with the percentages of eosinophils, Galectin-10 may help to identify cases with eosinophilic inflammation in multiple organs. Eosinophilic cholecystitis is more common in a calculous cholecystitis than the patients with calculus cholecystitis [10]. But in our case the patient has calculus cholecystitis which is unusual. Although prognosis of eosinophilic cholecystitis is excellent, it is essential to rule out other conditions associated with it which if left untreated can present with serious complications. In our case complete evaluation of other system involvement was done and there was no involvement of other systems.

CONCLUSION

Eosinophilic cholecystitis is a very rare condition. The mechanism of occurrence is unclear. Therefore, we still need more studies to understand the mechanism at molecular level that can predispose to eosinophilic infiltration in patients with Eosinophilic cholecystitis. Once Eosinophilic cholecystitis is diagnosed by histological examination, it is by essential to carry out further evaluation for complete workout of the patient by physician to exclude other associated syndromes and organ involvement. Surgical Management of eosinophilic cholecystitis can be challenging as it presents intraoperatively with frozen Calot's triangle which carries a high rate of laparoscopic converted to open Cholecystectomy.

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