

Case Report

A Rare Case of Eosinophilic Cholecystitis

Khalid H Al-Hammad^{1,2}, Adel Al-Fudari^{1,2}, Maher Maurice²¹Kuwaiti Board of Surgery²Department of Surgery, Mubarak Al-Kabir Hospital, Kuwait

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ABSTRACT

Eosinophilic cholecystitis is a rare form of cholecystitis. It is characterised by eosinophilic infiltration of the gallbladder. The etiology is not completely understood, but many hypotheses have been made. Presentation is similar to typical cholecystitis and histopathology

remains the mainstay for diagnosis. Surgery is the treatment of choice. We report a case of eosinophilic cholecystitis presented as recurrent acute attacks of cholecystitis and laparoscopic cholecystectomy was performed.

KEY WORDS: acalicular cholecystitis, eosinophilic cholecystitis

INTRODUCTION

Eosinophilic cholecystitis (EC) is a rare inflammatory condition of the gallbladder. It is diagnosed when the cellular infiltrate of the gallbladder wall is composed of more than 90% eosinophils^[1]. It is an uncommon condition that was first described in 1949^[2]. The etiology of EC is not completely understood, but might be associated with hypersensitivity to antibiotics, other drugs, herbal medicines, hepatic echinococcosis, or as a variant of eosinophilic gastroenteritis^[3,4]. We report a case of EC in which a specific cause could not be identified.

CASE REPORT

A 55-year-old woman, with a known case of bronchial asthma, presented to the emergency department complaining of abdominal pain. The pain was epigastric, radiating to the right upper quadrant and right shoulder. It was associated with nausea and vomiting for two days. This was her third attack over one year, during which she was investigated by abdominal ultrasound that showed thickened wall of the gallbladder with no stones. The patient also underwent upper gastrointestinal endoscopy that showed gastritis, and a biopsy was taken which revealed moderate chronic gastritis that was negative for *H. pylori* and intestinal metaplasia. She also

underwent lower gastrointestinal endoscopy with normal findings. The general examination of the patient revealed a good general condition with no jaundice. Abdominal examination showed positive Murphy's sign. Laboratory analysis showed eosinophil of 1.4 (RR: 0.02 – 0.5 10⁹/L) and alkaline phosphatase of 124 (RR: 22– 88 IU/L), which were elevated in her previous tests also. An abdominal ultrasound was performed and showed a picture of acalicular cholecystitis with positive sonographic Murphy's sign (Fig. 1). The patient was admitted for further evaluation. A CT scan of the abdomen with intravenous contrast was performed, which also showed a picture of acalicular cholecystitis (Fig. 2). The case was discussed with the patient and cholecystectomy was offered, for which she agreed. A laparoscopic cholecystectomy was done and showed mildly thickened gallbladder wall with no stones. The histopathological examination showed eosinophilic cholecystitis (Fig. 3 A and B). The patient did well post-operatively; and on follow-up, she was free of any abdominal pain.

DISCUSSION

Eosinophilic cholecystitis is an uncommon form of cholecystitis, with an incidence ranging from 0.25 – 6.4% in cholecystectomy specimen^[5]. It has a clinical presentation similar to typical cholecystitis, with right

Address correspondence to:

Dr. Khalid Hamad Al-Hammad, Department of Surgery, Mubarak Al-Kabir Hospital, Al-Jabriya, P.O. Box 43787, Code: 32052 Kuwait. Tel: (+965)99100191; E-mail: duke_alhammad@hotmail.com



Fig 1: An ultrasonography of the abdomen showing mildly thickened gallbladder wall



Fig 2: A CT scan of the abdomen showing the same ultrasonography findings

upper quadrant pain and an elicited Murphy's sign. In clinical practice, EC is clinically indistinguishable from the most common form of acute cholecystitis^[5].

Although the etiology of EC is obscure, a literature review showed that most patients with EC had an idiopathic etiology^[3,6]. Eosinophils are one of the immune system white blood cell components responsible for combating multicellular parasites and infections in vertebrates. Along with mast cells, eosinophils also control the mechanisms associated with allergy and asthma. An increase in eosinophils typically occurs in people with parasite infection of the intestine, collagen vascular disease (rheumatoid arthritis), malignant disease (Hodgkin's disease), extensive skin disease (exfoliative dermatitis), Addison's disease, and the use of certain drugs (penicillin)^[7]. In patients with eosinophilic infiltrate affecting other organs and tissues or as a part of a syndrome (Eosinophilic granulomatosis with polyangitis, also known as Churg-Strauss Syndrome), it has been reported that the disease can be divided into three stages: first, a prodromal stage characterized by asthma and allergic manifestations; second, eosinophilic infiltration into tissue, predominantly the lungs and myocardium; and finally, a systemic stage, associated with the development of necrotizing vasculitis^[8]. Regarding imaging tests, ultrasound results may be normal or show signs suggestive of cholecystitis (gallbladder distension, wall thickening, perivesicular liquid or sonographic Murphy's sign). A CT scan may reveal similar features, with perivesicular oedema or decreased attenuation in adjacent liver, indicative of perihepatitis^[9]. Histopathology remains the mainstay for diagnosis of EC as there is no specific clinical presentation^[10]. The treatment of choice is cholecystectomy^[10]. However, steroids can be used as a treatment and good symptomatic response has been reported, especially if it is associated with gastroenteritis. Sphincterotomy can also be done if the case is associated with ampullary stenosis^[11].

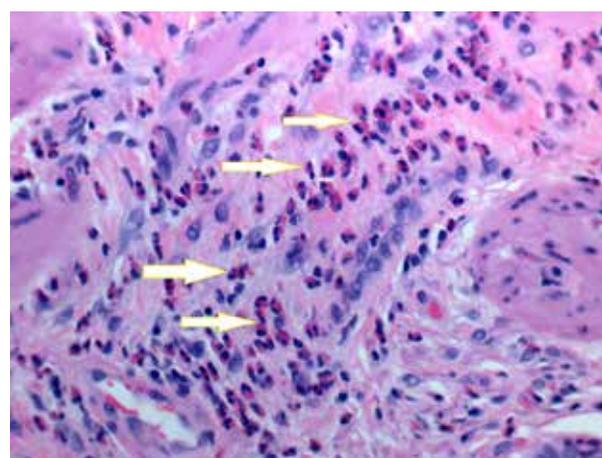
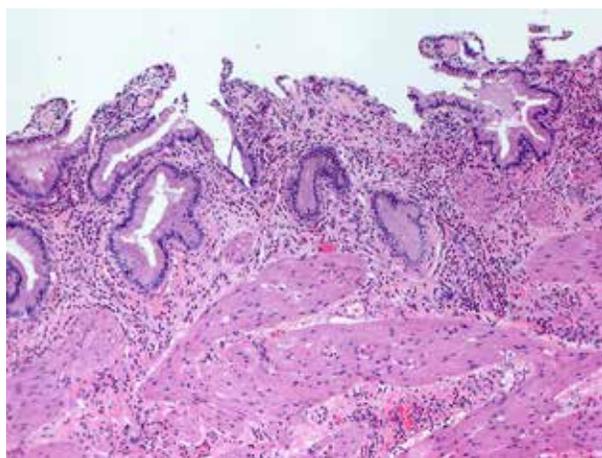


Fig 3 A and B: The histopathological examination (stain=hematoxylin and eosin stain) showing (A) dense eosinophilic infiltration of the gallbladder wall, (B) A magnified slide (40x)

CONCLUSION

Eosinophilic cholecystitis is a rare form of cholecystitis in which the etiology is not completely understood. The diagnosis is made by histopathology and cholecystectomy remains the treatment of choice.

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