



CASE STUDY

IDIOPATHIC EOSINOPHILIC CHOLECYSTITIS WITH CHOLELITHIASIS: A REPORT OF  
RARE CASES IN HAPUR REGION

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ABSTRACT

Eosinophilic cholecystitis is a rare and poorly understood entity first described in 1949 which diagnosed on the basis of classical presentation of cholecystitis with the trans-mural inflammatory infiltrates predominantly presence of more than 90% eosinophilic with in the gall bladder. It may be idiopathic or it may be associated with other disease conditions, like hyper-eosinophilic syndrome, drug intake, eosinophilic myalgia syndrome, few herbal medicines and some parasitic infestations. We report three cases who presented with pain in right upper quadrant. On ultrasonography of all three cases reveals multiple stones in first & second cases and third case are single stone, which on histopathological was diagnosed as eosinophilic cholecystitis. Retrospective analysis of their histories and their investigations. We present these cases because of their rare occurrence and worst prognosis than cholecystitis.

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INTRODUCTION

Eosinophilic cholecystitis (EC) is a uncommon condition that was first described by Albot *et al.* in 1949. It is diagnosed when eosinophilic infiltration in layers (mucosa and lamina propria) of gall bladder is more than 90% eosinophils with other inflammatory cells known as lympho-eosinophilic cholecystitis.

Case Series

We report 3 cases of eosinophilic cholecystitis in which first two are females and third is male aged 28, 32 and 40 years respectively.

**Case 1:** A 28 year old female presented with pain and tenderness on and off in right upper quadrant since 18 months. Laboratory investigations showed Hb 11.5gms/dl; TLC  $5.5 \times 10^9/L$ ; DLC neutrophils 66%, lymphocytes 30%, monocytes 2%, eosinophils 2%; ESR 18 mm/hr; random blood sugar 98 mg/dl; bilirubin (total) 1.1mg%; SGOT 36IU/mL; SGPT 39IU/mL; HbsAg negative.

Chest X-ray normal. Ultrasound of the abdomen revealed a distended gall bladder with multiple stone. Laparoscopic cholecystectomy was done under general anaesthesia. Gross examination shows, gall bladder was 6.6cm in length with wall thickness of 2mm. On opening, multiple stones were present. On microscopically, focally preserved lining epithelium seen with eosinophil also seen in mucosa and lamina propria along with few lymphocytes. No etiological factor was found.

**Case 2:** A 32 years female presented pain in right hypochondrium for last 2 month. Her investigation shows Hb 11gm/dl; TLC  $8.5 \times 10^9/L$ ; DLC neutrophils 56%, lymphocytes 37%, monocytes 4%, eosinophils 3%; ESR 12 mm/hr; random blood sugar 102 mg/dl; SGOT 58IU/mL; SGPT 75IU/mL; Alkaline phosphatase 182IU/mL; HbsAg negative. Ultrasound was suggestive of chronic cholecystitis. Cholecystectomy was done. On grossing, gall bladder was 5.7cm in length with wall thickness 1.6mm on opening, multiple mixed stones were seen. Microscopically, atrophied mucosa presents. In addition to cholecystitis there was a prominent eosinophils were seen.

**Case 3:** A 40 years male presented pain in right hypochondrium on and off for last 12 month. Pain was radiate to the back. There was no family history. Laboratory investigation shows Hb 11.8gm/dl; TLC  $9.8 \times 10^9/L$ ; DLC

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neutrophils 68%, lymphocytes 30%, monocytes 2%, eosinophils 0%; random blood sugar 88 mg/dl; SGOT 158IU/mL; SGPT 275IU/mL; Alkaline phosphatase 382IU/mL; HbsAg negative. Ultrasound was suggestive of chronic cholecystitis. An open Cholecystectomy was done. On grossing, gall bladder was 8.4cm in length with wall thickness 3mm. On opening, single stone was seen. Microscopically, atrophied mucosa along with hypertrophied muscularis seen. In addition to cholecystitis there was a prominent eosinophils were seen in mucosa and lamina propria. All three cases were diagnosed of idiopathic eosinophilic cholecystitis.

## DISCUSSION

Eosinophilic cholecystitis (EC) is a rare and poorly understood disease of the gallbladder, which was first described in 1949 (Albot *et al.*, 1949). The prevalence of EC ranges from 0.25% to 6.4% as reported in various studies across the world (Dabbs, 1993). The term primary epithelial hyperplasia of the gallbladder was proposed by Elfving in 1960, restricted to cases not associated with cholelithiasis, inflammatory lesions of the gallbladder, primary sclerosing cholangitis or ulcerative colitis (Elfving, 1967). It can be considered an inflammatory condition of the gallbladder, in which the inflammatory infiltrate consists primarily of eosinophils. The aetiology of EC is unknown. It has also been hypothesised that EC may be caused by hypersensitivity to bile acids (Pardo-Mind *et al.*, 1980 and Alfaro *et al.*, 1995). Cases have also been reported secondary to infections, parasitic like clonorchis sinensis and Ascariasis, allergies, hyper-eosinophilic syndrome, eosinophilia-myalgia syndrome, and eosinophilic gastroenteritis, drugs like cephalosporin, erythromycin and herbal medicines also may contribute to this entity (Sahu, 2007). Other causes include polyarthritis nodosa, lupus erythematosus, Cohn's disease, sarcoidosis, and Sjogren's syndrome (Hepburn, 2000). The EC is three times more common in patients with acalculous cholecystitis than in patients with cholelithiasis (Sánchez-Pobre *et al.*, 1997). EC does not present any clinical or laboratory manifestation to distinguish it from common cholecystitis, and so it is difficult to detect prior to cholecystectomy and histological examination of the surgical specimen. The diagnosis of eosinophilic cholecystitis is based on histopathology of cholecystectomy specimens. EC is said to be present when the cellular infiltrate in the gallbladder wall is composed of more than 90 % eosinophils, and the cholecystitis is chronic with an eosinophilic (lympho-eosinophilic) component if the

infiltrating inflammatory leukocyte population contains 50-75 % eosinophils (Punia, 2003). Treatment with corticosteroids can be effective when the bile ducts are affected, or when the condition is associated with eosinophilic gastroenteritis. We present these cases because of the rare occurrence of eosinophilic cholecystitis with cholelithiasis. Idiopathic EC is significant because it is not apparent solely through laboratory tests. A pathologist should be aware of these rare conditions, since the physical findings of eosinophilic cholecystitis are indistinguishable from manifestation of the common acute cholecystitis. Therefore, there is need to investigate the patient carefully for other associated illnesses, which might have a worse prognosis than cholecystitis itself.

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