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Case Report

Idiopathic Eosinophilic Cholecystitis with Cholelithiasis - A Rare Pathological Entity

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ABSTRACT

Eosinophilic cholecystitis (EC) is a rare and poorly understood entity first described in 1949. It may be defined as an inflammatory condition of gall bladder in which the transmural inflammatory infiltrate predominantly comprises of eosinophils that clearly overshadows the presence of any other inflammatory cell component. The etiology of EC is unclear, but suggested factors include eosinophilia-myalgia syndrome, allergies parasitic infestations, drug intake and local diathesis involving gallstones, parasites, acalculous cholecystitis, hyper eosinophilic syndrome (HES) and eosinophilic gastroenteritis (EGE). We report a case of a 50 year old female who presented with complaints of abdominal pain and tenderness in the right upper quadrant. Ultrasonography of the abdomen showed a distended gallbladder with multiple calculi. All the relevant laboratory investigations were within normal limits. Laparoscopic cholecystectomy was done under general anaesthesia. Histopathologic examination of the gallbladder showed numerous eosinophils comprising more than 90% of the inflammatory infiltrate in mucosa and lamina propria. In the absence of any apparent etiology after detailed workup of our case we considered it as one of idiopathic EC with cholelithiasis. Histopathology remains the mainstay for diagnosis of EC as there is no specific clinical/ radiological presentation. Though the treatment of choice for EC is cholecystectomy the patient must be evaluated meticulously to rule out other associated diseases which may have a worse prognosis than chronic cholecystitis itself.

Key words: Gall bladder, eosinophilic cholecystitis, cholelithiasis.

INTRODUCTION

Eosinophilic cholecystitis (EC) is an uncommon condition that was first described by Albot et al. in France in 1949. [1] It is defined as an acalculous cholecystitis but in rare instances it is associated with cholelithiasis. [15] Histologically, EC is characterized by a dense transmural infiltration by eosinophils comprising of 90% or more of the leukocytes. [2,3] When the infiltrate consists of 50-75% eosinophils along with other inflammatory cells it is called lympho-eosinophilic cholecystitis. [4] The etiology of EC is unclear, but few suggested origins include eosinophilia-myalgia syndrome, allergies, parasitic infestations, with drug intake, allergies, local diathesis involving gallstones, acalculous cholecystitis, HES and EGE. [2,5-10]

CASE REPORT

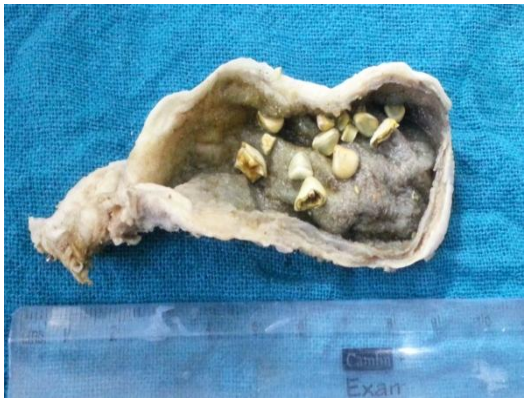

Figure 1: Gross picture of gall bladder showing multiple yellow faceted stones.

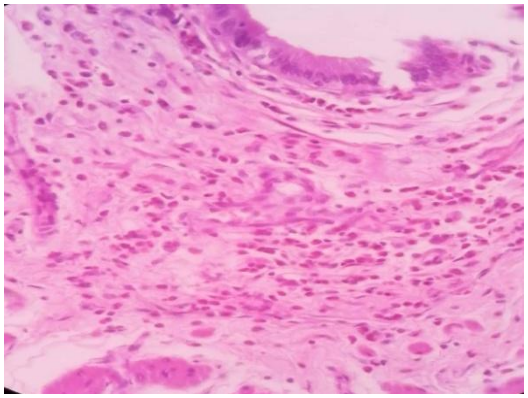

Figure 2: Photomicrograph from gall bladder showing eosinophils infiltrating mucosa, lamina propria(H&E 40X).

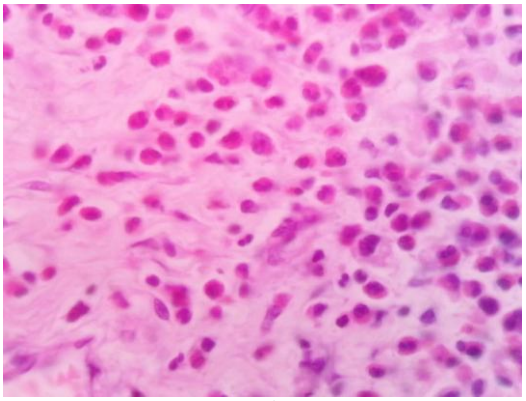

Figure 3: Photomicrograph from gall bladder showing inflammatory infiltrate predominantly comprising of eosinophils. (H&E 100X).

A 50 year old female presented with complaints of abdominal pain and tenderness in the right upper quadrant. There was no history of bronchial asthma, joint/muscle pain or any herbal medicine intake. Laboratory investigations showed: Hb 11.2 gms/dl; TLC 7.5 x 10^9/L; DLC neutrophils 61%, lymphocytes 34%, eosinophils 02%, monocytes 03%; ESR 12mm/hr; BT 2'10", CT 6'10"; random blood sugar 94 mg/dl; serum bilirubin (total) 0.74 mg%; SGOT 30 IU/mL; SGPT 35 IU/mL, HbSAg negative; blood urea 26 mg% & creatinine 1.1 mg%. Stool examination revealed no ova or cyst. Chest X-ray normal.USG of the abdomen showed a distended gallbladder with multiple tiny calculi. Rest of the abdominal organs liver, common bile duct, and pancreas were within normal limits, except for mild concretions seen in left kidney. Laparoscopic cholecystectomy was done under general anaesthesia. Gross examination showed a gall bladder measuring 11 cm in size with areas of congestion on outer surface. On opening multiple yellow faceted stones came out along with bile, mucosa and wall thickness was unremarkable (Figure 1).

Histopathologic examination of the gallbladder showed focally preserved lining epithelium, inflammatory infiltrate predominantly comprised by eosinophils in mucosa, lamina propria with fibromuscular hyperplasia (Figure 2&3). Detailed clinical workup of our case was done and no etiological factor was found. A diagnosis of idiopathic EC with cholelithiasis was made.

DISCUSSION

In the majority of cases of chronic cholecystitis, gallstone impaction in the neck of the gallbladder or cystic duct sets off the inflammatory process. The bile concentrates, which leads to chemical irritation and may facilitate bacterial incursion. [10] Lymphocytes, macrophages, and neutrophils comprise the inflammatory infiltrate along with mucosal edema, vascular congestion, and regions of necrosis. When the infiltrate is made up of rich infiltrate of eosinophils, there are signs of inflammation, granulation tissue, and fibroblast propagation. [11-13]

Eosinophilic infiltration of the gastrointestinal tract may occur not only as EC, HES (including eosinophilic cholangiopathy), or EGE, but also as eosinophilic granulomatous hepatitis and

eosinophilic ascites [14] Acalculous cholecystitis has also been associated with EC, with invasion of the mucosal surface by eosinophils. [15] Causes of acute acalculous cholecystitis include herbal medicine, [7] critical illness, decreased motility of the gastro- intestinal tract, major burns, and hyper alimentation. [15] Other causes include polyarteritis nodosa, lupus erythematosus, Crohn's disease, sarcoidosis, and Sjogren's syndrome. [10]

In the absence of any apparent precipitating etiology after thorough work up, the case described herein is considered one of idiopathic EC with cholelithiasis. Pathologic examination of the gallbladder revealed >90% eosinophilic infiltration with minimal lymphocytes.

Histopathology remains the key for diagnosis of the EC as there is no specific clinical/radiological/gross presentation. The treatment of choice for EC with cholelithiasis is cholecystectomy. However, steroids may be used as an adjuvant therapy if the disorder is associated with gastroenteritis. [16] Our case no associated gastroenteritis found. Patient is on regular follow up and doing well so far.

The significance of reporting EC on histopathology lies in the fact that it may be the presenting feature of many other associated conditions. e.g., eosinophilia-myalgia syndrome, allergies, parasitic infestations, drug intake, local diathesis involving gallstones, acalculous cholecystitis, HES and EGE. It is therefore important to diagnose and evaluate patient further thoroughly to look for associated conditions which may have a poorer prognosis than cholecystitis is itself.

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