# IDIOPATHIC EOSINOPHILIC CHOLECYSTITIS WITH CHOLELITHIASIS: A CASE REPORT

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#### ABSTRACT

Eosinophilic cholecystits is a rare condition with obscure etiology. They are diagnosed histopathologically on resected specimens. We report a similar case confirmed on histopathology of a 23 years old lady who underwent routine elective cholecystectomy for chronic cholecystitis due to gall stones. The rarity of condition prompted us to report this entity.

Key Words: Eosinophilic Cholecystitis, Cholelithiasis, Cholecystectomy

#### INTRODUCTION

Eosinophilic cholecystitis (EC) is a rare entity that presents in a manner comparable to acute cholecystitis. On Histopathological examination of Gall bladder; cellular infiltrate comprising of 90% eosinophils is classified as eosinophilic cholecystitis. When the infiltrate comprises 50-75% eosinophils along with other inflammatory cells in the gall bladder wall, they are termed lympho-eosinophilic cholecystitis (Sanchez-Pobre *et al.*, 1997; Punia *et al.*, 2003). Eosinophilic cholecystitis was described for the first time by Albot in France in 1949 (Albot *et al.*, 1949). This rare condition has received attention from French workers who consider it to be a discrete clinical and pathological entity due to a local allergic process within the gall bladder. It is prevalent in 0.25 -6.4% of all cholecystitis (Sahu et al., 2007; Mohan et al, 2005).The average age of presentation is around 37years (Felman *et al.*, 1994). It is described as an acalculous cholecystitis but in rare cases it is associated with cholelithiasis (Pary *et al.*, 1998). They neither have any specific clinical manifestation nor have any laboratory features. The diagnosis is based on histopathology of cholecystectomy specimens.

We report a case of idiopathic eosinophilic cholecystitis with cholelithiasis because of its rarity and the need to investigate the patient for other associated disease conditions, which may range from simple gastritis to parasitic infestation, to a serious condition like hypereosinophilic syndrome or a debilitating disease like eosinophilia-myalgia syndrome.

#### CASE

A 23 year old female patient presented to her clinician with the few months history of pain, tenderness and guarding in the right upper quadrant. There was no history of drug intake and no significant past or family history. On examination, the patient was afebrile, and there was no icterus, cyanosis or pallor. Murphy's sign was positive.

Laboratory investigation showed: Hb11.8g%; TLC5200/cmm; DLC: Neutrophils 60%, Lymphocytes 35%, Monocytes 2%, Eosinophils 3%. Liver function tests showed Bilirubin (Total/Direct) 0.6/0.2mg%; SGOT 26 IU/ml; SGPT 30 IU/ml; Alkaline phosphatase 82 IU/ml; Total protein 6.8g%; Albumin 3.9g%. The stool was negative for ova & cyst. Electrolytes and lipid profile were within normal range.

Ultrasound examination of the abdomen revealed a distended gall bladder with two calculi. One calculus of 19mm was impacted in the neck of gall bladder and another measuring 7mm was lying with sludge within the lumen. Liver, common bile duct and the rest of the abdominal viscera were unremarkable. A clinical diagnosis of acute cholecystitis with cholelithiasis was made. An open cholecystectomy was

International Journal of Basic and Applied Medical Sciences ISSN: 2277-2103 (Online) An Online International Journal Available at <u>http://www.cibtech.org/jms.htm</u> 2012 Vol. 2 (1) January-April, pp.48-51/Krishan et al. **Case Report** 

performed and thick walled distended gall bladder was noted. Postoperatively patient had an uneventful recovery and was discharged on oral analgesics.



Figure 1: Section of gall bladder showing inflammation in all the layers of wall.



Figure 2: Inflammatory infiltrate consisted predominantly of eosinophils, suggesting eosinophilic cholecystitis.

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The operative specimen received for histopathological examination measured 9cm in length. Cut section showed thickened wall, ulcerated mucosa and bile in the cavity. Multiple strips were taken from the specimen and routinely processed.

H & E stained sections showed mucosa lined by columnar epithelial cells heavily infiltrated by inflammatory cells. The inflammatory infiltrate was present in all layers of gall bladder and consisted mainly of eosinophils with few lymphocytes, plasma cells and macrophages (Fig 1 & 2). The deeper layers showed fibrosis and muscular hyperplasia. A histopathological diagnosis of idiopathic eosinophilic cholecystitis with cholelithiasis was made.

### DISCUSSION

Eosinophilic cholecystitis is an infrequent and poorly understood inflammatory condition of the gall bladder. The etiology of eosinophilic cholecystitis is still obscure. Pardo Mindas *et al.*, (1980) described eosinophilic infiltrates of isolated organs and tissues not associated with any history of allergy in patients (Pardo-Mindan et al, 1980). It has been proposed that eosinophilic cholecystitis may result from a hypersensitivity type of inflammatory response to altered bile (Dabbs 1993) or to gall stones as seen in our patient, or parasites as its likely cause. As no eosinophilia was found in the peripheral blood of our patient, which suggests that eosinophilic infiltration in the gall bladder wall was a local reaction.

Eosinophilic cholecystitis has been reported alone or in combination with eosinophilic gastroenteritis, eosinophilia-myalgia syndrome, idiopathic hypereosinophilic syndrome, parasitic infestations (*Clonorchis sinensis*, hydatid cyst disease) and drugs like erythromycin, cephalosporins (Sanchez-pobre *et al.*, 1997). Rare cases of idiopathic eosinophilic cholecystitis have been reported in which no associated etiology could be found (Sanchez-pobre *et al.*, 1997; Dabbs 1993). In our patient, we could not find any possible etiology even after a detailed personal, past and family history along with a thorough physical examination and laboratory investigations.

Eosinophilic cholecystitis cannot be clinically distinguished from ordinary cholecystitis and it invariably leads to cholecystectomy (Tajima Katsushi and Katagiri, 1996). A suspicion of this entity can be kept if peripheral eosinophilia is present (Vauthey *et al.*, 2003). The significance of eosinophilic cholecystitis lies in the fact that it may be associated with other more severe disease conditions and eosinophilic cholecystitis may be a presenting feature of these conditions. These may be missed if the patient is not subjected to thorough clinical and laboratory investigations. However, if a patient presents only with symptoms of cholecystitis and a post-operative histopathologic diagnosis of eosinophilic cholecystitis is made, the patient must be investigated to rule out other associated disease conditions, which may have a worse prognosis than cholecystitis itself.

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International Journal of Basic and Applied Medical Sciences ISSN: 2277-2103 (Online) An Online International Journal Available at <u>http://www.cibtech.org/jms.htm</u> 2012 Vol. 2 (1) January-April, pp.48-51/Krishan et al. **Case Report** 

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