CASE REPORT

Housedustmite Allergy as the Cause of Eosinophilic Collitis: A Case Report

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ABSTRACT

There are only few cases of Eosinophilic Collitis(EC) have been reported worldwide. The mechanism and aetiology of EC are still unclear. We describe a 35 years old man presented with chief complaints of gastrointestinal symptoms. In blood examination, his total IgE and specific IgE to house dust mites were very high. Colonoscopy was done and histological examination from biopsy specimens reported infiltration of lymphoplasmacytic cells and eosinophils, compatible with Eosinophilic colitis. The patient was treated with antihistamine and short course of antibiotics. He was been advised to avoid house dust mites. He was then remained asymptomatic. Our report suggests house dust mites allergy as the causes of EC. Combination of antihistamine, antibiotics and avoidance of house dust mites are helpful in treating EC in this particular case.

Keywords: Eosinophilic colitis, House dust mite, allergy

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INTRODUCTION

Eosinophilic colitis (EC) is a form of primary eosinophilic gastrointestinal disease (EGID) which is characterised by the inappropriate accumulation and infiltration of eosinophils in the intestinal mucosa(1). Eosinophilic esophagitis (EE), another subtype of EGID is a condition that is more well recognised and understood due to its most common form of EGID and excellent reviews that have been published before (2). In contrast, EC is a rare form of EGID and the understanding of its condition is still so little since only few cases have been reported since 1979(1). Previously, it has been reported that it affects the neonates and young children in which the condition is mainly associated with specific food allergies with history of allergy or atopy(1). However, in adult the potential causes of EC are less known. Some of the cases reported in adult, the allergic sources were unidentified and the mainstay treatment is corticosteroids (3). Here, we report a case of eosinophilic collitis in adult with hypersensitivity which was induced by allergens such as house dust mites identified through specific IgE blood test. Interestingly, he was started with combination of antibiotics and oral antihistamines. In addition, he was also been advised to avoid the mentioned causes and his condition improves tremendously without starting the patient on corticosteroid, which is the mainstay treatment for EC.

CASE REPORT

Patient is a 35 year old gentleman presented with 1 week history of right sided abdominal pain, loose stool that mixed with blood clot and mucus. He complaint of tenesmus and easily fatigue but not associated with loss of weight, loss of appetite and also no family history of colorectal carcinoma. He had stable Bronchial Asthma which is on MDI Salbutamol on when needed basis. He had history of multiple drug allergies such as Diclofenac Sodium, antibiotics penicillin group and clindamycin. He denied of eczema, allergic rhinitis and particular food allergies. No remarkable feature was observed in his physical examination.

His blood test investigation revealed peripheral eosinophilia, 500/µL (normal range: 80-280/µL). Other parameters in Full Blood Count (FBC), Liver Function Test (LFT) and Renal Function Test (RFT) were normal. No abnormalities were found in his Full Blood Picture (FBP). Colonoscopy was done and showed a longitudinal ulceration in the lower rectum with erythematous mucosa and edematous anal papillae (Figure 1).
In addition, multiple focal area of erythematous, edematous mucosa with intervening normal mucosa were also observed in descending, transverse and ascending colon. Multiple biopsies were then taken in rectum

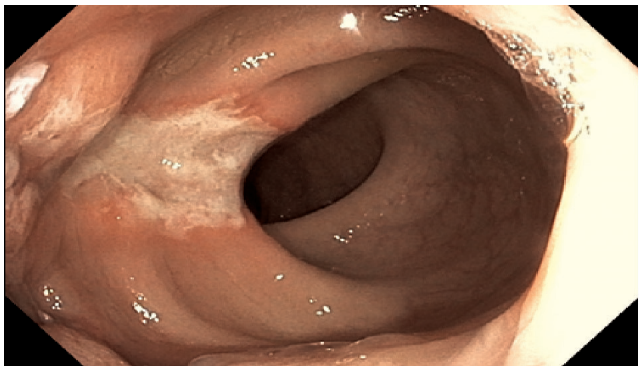

Figure 1: Colonoscopy image prior to treatment with antihistamine

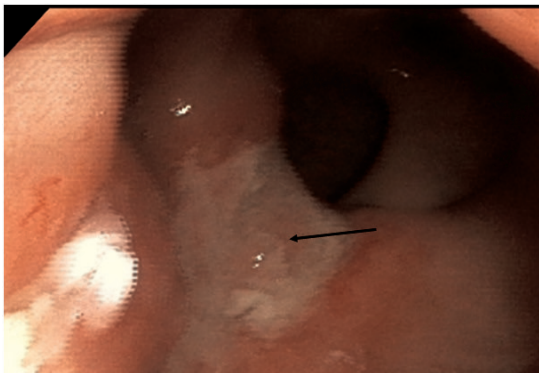

Figure 2: Colonoscopy performed 1 week after treatment

and every colonic segments. The Histopathological Examination (HPE) of biopsies reported that the lamina propria is moderately populated by predominantly lymphoplasmacytic cells and eosinophils. To investigate further, total IgE and specific IgE to certain allergens were done. The result demonstrated a significantly high total IgE level , 2316 kU/l and very high specific IgE level to house dust mites (Table I). At this point, a diagnosis of Eosinophilic Collitis was made.

Table 1: List of allergens tested

Allergen	Concentration (kuA/L)
Egg white	0.09
Milk	0.06
Fish (cod)	0.08
Peanut	0.09
Pacific squid	0.05
Egg yolk	0.06
Chicken meat	0.10
Clam	0.11
Housedustmites (*D.pteronyssinus, D.farinae, Blomia tropicalis*)	>100
Cat dander	0.21

(Reference range: 0 – 0.09 = undetectable, 0.1 – 0.5 = very low, 0.5 – 2.0 = low, 2.01 – 15.00 = Moderate, 15.01 – 50.00 = High, >50.00 = Very high)

He was treated with oral antihistamine combination with oral antibiotic, Ciprofoloxacin and Metronidazole for a week. He was also been advised to avoid any source of house dust mites. His condition was markedly improved and colonoscopy was repeated one week later which showed subsided multiple patchy erythema in colon with healing longitudinal ulcer in rectum (Figure 2). Since his condition and colonoscopic findings improved, antihistamine was continued for another week. At one year follow up, he remained asymptomatic.

DISCUSSION

EC is a rare disease. The incidence and prevalence of EC worldwide is still unknown. Up till now, only few cases of EC had been reported. The clinical features of EC include abdominal pain, nausea, vomiting, diarrhea, gastrointestinal bleeding, obstruction, malabsorption, weight loss and ascites. Previous studies mentioned that EC signs and symptoms are correlated with the pathological findings at different layer of intestinal wall(3). Mucosal-predominant is associated with mucosal dysfunction symptoms such as abdominal pain, nausea, vomiting, early satiety and diarrhea. Whereas, involvement of transmural results in symptoms of intestinal obstruction including nausea, vomiting and abdominal distension. Infiltration of subserosal results in the combination of the symptoms mentioned and ascites. The diagnosis of EC is based on the gastrointestinal symptoms, presence of peripheral blood eosinophilia and histologic evidence of a predominant eosinophilic infiltration in the gastrointestinal mucosal (4). In typical case of EC, the full blood count shows increment 20% - 80% of eosinophils.

The mechanism and aetiology of EC is unclear. Some studies demonstrated that food allergy such as cow's milk and soy seemed to be associated with the disease, mainly in infants (4). Drugs such as clozapine, carbamazepine, rifampicin, NSAIDs and tacrolimus had been described to induce EC (3). A case report by Inamura et al demonstrated that EC is an IgE mediated disease in which this is in opposed by other observations that suggested the pathogenesis of EC is not an IgE-mediated (5).

Previous studies and case reports demonstrated that corticosteroid therapy is the mainstay treatment in EC (3). Oral prednisone has shown to improve the clinical and pathological findings (3). In addition, budesonide has also been demonstrated to be beneficial in inducing and maintaining remission(4). For this patient, we took into consideration of corticosteroid therapy if his bowel symptoms did not respond well or relapse. However, we did not start him with corticosteroid since his bowel symptoms and colonoscopic findings were markedly improved with 2 weeks of antihistamine. There were studies that shown antihistamine as well as leukotriene inhibitor montelukast and mast cells stabilisers are also being used to treat EC but their role is not well established (4).

CONCLUSION

In summary, this case report adds more reports on EC

in adults. In our patient, allergy to house dust mites is the cause of EC in which this has never been reported before. Treatment with combination of antihistamine, antibiotics and avoidance of the allergic source is shown to be successful in treating our patient and this could be applied for other EC patients as well. The role of antibiotics in treating EC has never been established. So far, to our knowledge, no cases of EC had been successfully treated with antibiotics. Thus, the role of antibiotics in treating EC should be explored further.

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