

Title:

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Unusual ascites following ingestion of spicy food in a young woman

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Abstract:

Eosinophilic enteritis, one type of eosinophilic disorders, is a rare disease characterised by infiltration of the small bowel with numerous mucosal eosinophils or/and eosinophilic ascites pathologically. The prevalence of eosinophilic enteritis is fewer than ten in 100,000 people, frequently occurred in female¹. The pathogenesis of the disease is poorly known, but allergic diseases, autoimmune connective reaction and intestinal dysbiosis have been implicated.

Keywords: Eosinophils. Eosinophilic enteritis. Ascites.

Dear Editor,

A 26-year-old young female was admitted to our department with worsening upper abdominal pain and diarrhea for the past one week. She had eaten a lot of spicy foods for first time before the onset. She was given treatment as acute gastroenteritis, but the symptoms were not relieved significantly. Physical examination revealed epigastric tenderness and the shifting dullness was positive. After admission, routine laboratory tests showed elevations of white blood cell count of $14.3 \times 10^9/L$ (normal range $3.50-9.50 \times 10^9/L$), eosinophil count proportion of 20% (normal range 0.4–8.0%) . A contrast computed tomography (CT) scan of the abdomen showed dilatation and mucosal thickening of jejunum and ileum, and ascites (Figures A , B). Double-balloon enteroscopy (DBE) showed edema of all duodenum, jejunum and ileum mucosa (Figure C). Small bowel biopsies showed

inflammation of small bowel with eosinophil infiltration, up to 30 Eo/HPF (Figure D). Notably, eosinophilia was also observed in ascitic fluid analysis, with an elevated eosinophil count of 3600(normal range 50–300) (Figure E).These findings are consistent with the diagnosis of eosinophilic enteritis. Our patient received a treatment with prednisone 40 mg adays, her abdominal symptoms were improved in two weeks.

Eosinophilic enteritis, one type of eosinophilic disorders, is a rare disease characterised by infiltration of the small bowel with numerous mucosal eosinophils or/and eosinophilic ascites pathologically. The prevalence of eosinophilic enteritis is fewer than ten in 100,000 people, frequently occurred in female ^[1]. Allergen exposure, typically food allergens, was considered as a trigger in the development of eosinophilic enteritis ^[2]. During the course of treatment, the patient repeatedly mentioned a history of high doses of capsaicin ingestion. We reviewed some literature and found that capsaicin, as the main bioactive component of peppers, which contributed to the generation of inflammatory responses, and visceral hypersensitivity through the way of activation of TRPV1(transient receptor potential vanilloid 1) ^[3]. Thus, the history of high doses of capsaicin ingestion was likely to act as a triggering factor which facilitate the immune response and the development of hyper-reactivity. When excessive numbers of eosinophilic involved into the serosa, the patient might present with ascites. Empirical food-elimination diets and steroid is the first-line and effective therapy for eosinophilic enteritis, and most patients attained good clinical response without relapse. For some patients, avoiding such spicy food may be a good dietary recommendation.

References

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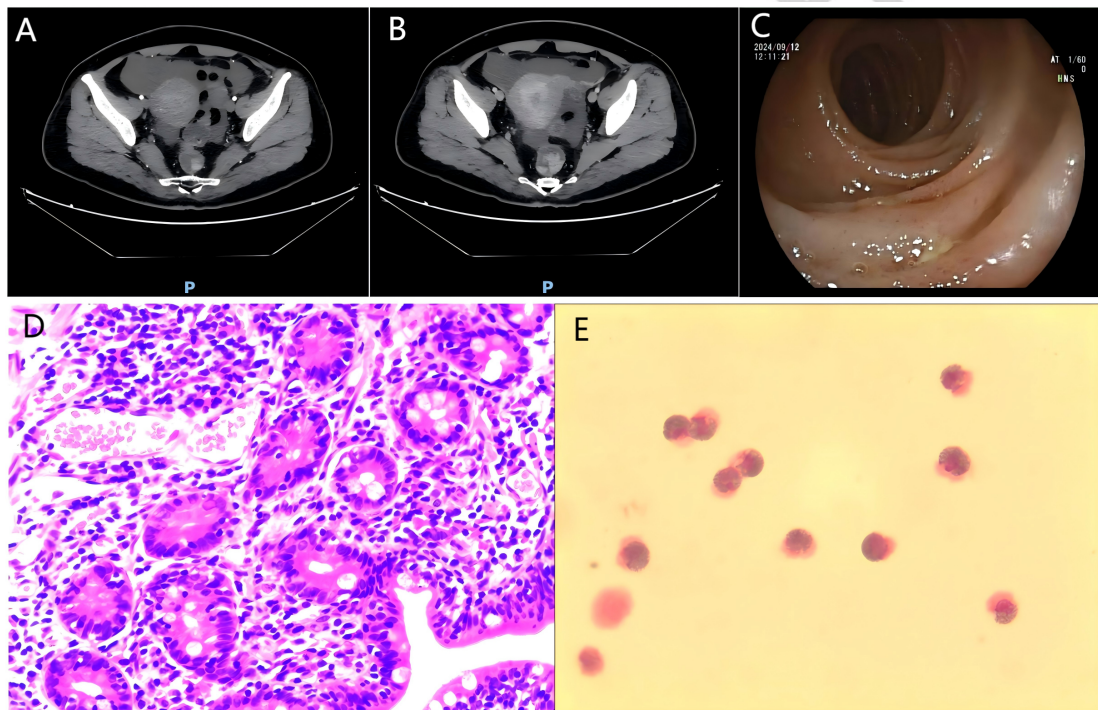


Figure: Abdominal contrast CT showed massive ascites with mucosal thickening and dilatation of jejunum and ileum (Figures A and B). Double-balloon enteroscopy showed disseminated hyperemia and edema in all duodenum, jejunum and ileum mucosa (Figure C). Biopsies from the small bowel revealed inflammation with eosinophil marked infiltration (Figure D). Pathological examination of ascites revealed plentiful eosinophils with a count of 3600 (Figure E).