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Editorial

The Gastric and Duodenal Eosinophilia in Functional Dyspepsia

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Article: Analysis of gastric and duodenal eosinophils in children with abdominal pain related functional gastrointestinal disorders according to Rome III criteria
Lee EH, Yang HR, Lee HS
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Functional dyspepsia (FD) is a common functional gastrointestinal (GI) disorder (1 in 10 people), and a chronic clinical syndrome associated with postprandial fullness, early satiation, epigastric burning, or epigastric pain. As valid clinical entities postprandial distress syndrome and epigastric pain syndrome are accepted.[1]

The pathogenesis of FD still remains to be established. However, many data suggest that environmental (inflections including *Helicobacter pylori* and diet), physiologic (acid, gastric accommodation, gastric emptying, and duodenal sensitivity), psychologic (anxiety, depression, and brain pain modulating circuits), and biologic (genes, cytokines, and duodenal eosinophilia) factors may play a role in the pathophysiology of FD.[1]

The role of eosinophilia in functional dyspepsia is not well established. It was hypothesized that eosinophils secondary to duodenal acid or food allergy accumulates in some patients with FD, and degranulate by the release of injured materials.[2] Also, eosinophilia in the stomach and duodenum is a secondary response to chronic inflammation by *H. pylori* infection.

In the original article of the *Journal of Neurogastroenterology and Motility*, Lee EH et al[3] described the relationship between gastroduodenal eosinophils and pediatric functional GI disorders. Few papers show that the gastric and duodenal eosinophil density was increased in children with functional GI disorders.[4,5] This article showed similar results in pediatric patients with functional GI disorders, however, the diagnosis was based on the Rome III criteria, and excluded food allergy, asthma, atropic dermatitis, and rhinitis before the diagnosis. *H. pylori* infection group showed high eosinophils in the stomach and duodenum, but no statistical significance.

In summary, the gastric and duodenal eosinophilia versus the clinical symptoms of pediatric FD are not as yet clearly correlated. The paper by Lee EH et al[3] showed the possibility of correlation between eosinophils in the stomach and duodenal biopsy specimens, and the clinically diagnosed using by Rome III criteria. The results provide the pivotal information regarding the low-grade inflammation associated with functional GI disorders.

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