

Role of Giardia lamblia Infection in the Pathogenesis of Gastritis in Patients with Dyspepsia

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Abstract : Objective: Giardia lamblia parasite is the most common protozoal infection in human. Concomitant Helicobacter Pylori (H. pylori) and Giardia lamblia infection is common for their similar mode of transmission and strong correlation to socioeconomic levels. Only few reports had described gastric giardiasis. Our aim was to detect H. pylori and Giardia in gastric antral mucosal biopsies from patients with dyspepsia. The impact of both pathogens on clinical, endoscopic and histopathological changes was studied. Methods: 48 patients with dyspepsia (group1) and 28 control patients (patients undergoing esophagogastroduodenoscopy EGD for reasons other than dyspepsia), (group 2) were studied. Endoscopic data were reported and gastric biopsy specimens were obtained for subsequent PCR assay for both organisms and for histopathological and electron microscopic examination. Results: Endoscopic antral gastritis and duodenal lesions were found in both groups, however, they were significantly more frequently in group 1 ($p= 0.002$ and $P= 0.0005$ respectively). Esophageal lesions, nodular antral gastritis, gastric ulcers and superficial corpal gastritis were found only in group 1. PCR detected H. pylori infection in 58% Vs 64 % for group 1 and group 2 respectively ($P: NS$). Giardia infection was present in 67 % Vs 42 % for group 1 and group 2 respectively ($P=0.0003$, $Odd\ ratio=2.6$). Co-infection with H. pylori and Giardia was present in 33% of group 1 Vs 36% for group 2 ($P:NS$). Abnormal histologic findings were found in both groups, however, intestinal metaplasia was found in group 1 only. Cellular abnormalities in the form of cytoplasmic vacuoles, mitochondrial destruction or nuclear abnormalities were found by Electron microscopic study in infected subjects of both groups. Conclusion: H. pylori is not the only gastric pathogen in our community, gastric giardiasis is another pathogen. Its contribution might be a factor in persistent dyspepsia after H. pylori eradication.

Keywords : dyspepsia, gastritis, Giardia lamblia, H. pylori

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