

## Prevalence of Non-Helicobacter Microorganisms in Gastric Biopsy Samples of Patients with Dyspepsia

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**Background & Objectives:** In the stomach gastric acidity kills many of ingested microbes. It was generally considered that the stomach is not inhabitable by any microbes except *H. pylori*. The aim of this study was to investigate colonization of micro-organisms other than *H.pylori* in biopsy samples of patients with dyspepsia and their correlations with the disease.

**Methods:** Total of 200 biopsy samples (Two antrum biopsies per patient) were collected during routine endoscopy. The samples were cultured on Brucella blood agar, MacConkey agar and Blood agar at microaerophilic and aerobic atmospheres. Urease activity (RUT), microscopic analysis of the biopsy sections, bacteriological identification and colony counts of each isolate were done according to standard Methods. Identity of all *H. pylori* isolates were confirmed by glm PCR.

**Results:** Among 100 patients, 42% were shown positive culture results for bacteria. All of these bacteria showed colony counts of CFU/ml. While RUT was positive in 31% of biopsies, only %25 of the isolated bacteria belonged to *H. pylori*. Other organisms included *Streptococcus* spp. (%9), *Klebsiella* spp. (4%), *Staphylococcus epidermidis* (3%), *E.coli* (2%), *Enterobacter* spp. (2%), *Acinetobacter* spp. (2%), *Lactobacillus* spp. (3%), *Citrobacter* spp. (1%), *Micrococcus* spp. (1%), *Corynebacterium* spp. (1%), *Bacillus* spp. (1%), *Pseudomonas* spp. (1%) and Yeast (1%).

**Conclusion:** Reduced acidity due to progressive atrophic gastritis may increase microbial population diversity in the stomach. Our results interestingly showed that most of the identified bacteria have different degrees of urease activity that may mimic *H. pylori* behavior in this niche. Little is known about the association between other members of stomach microbiota (culturable and unculturable) and gastric disease. More detailed studies are needed to determine these associations.

**Keywords:** Stomach Biopsies; Non-Helicobacter Microorganisms; Dyspeptic Patient