

Detection of Helicobacter Pylori in Saliva of Patients with Periodontitis and Periodontally Healthy Individuals in a Sri Lankan Population

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Helicobacter pylori is a highly successful human pathogen and a Class I carcinogen which resides in the gastric mucosa playing a crucial role in the development of gastrointestinal diseases ranging from gastritis to gastric adenocarcinoma. The oral cavity has been identified as the primary extra gastric reservoir for *H. pylori*. Hence, the influences of oral health status on *H. pylori* infection have been investigated in various studies. Periodontitis, an inflammatory disease affecting the teeth-supporting structures, can potentially host bacterial pathogens of significant medical concern. Even though a positive correlation between periodontitis and the presence of oral *H. pylori* has been identified in various studies, such studies are scarce in Sri Lanka. Moreover, Polymerase Chain Reaction (PCR) has not been used to detect *H. pylori* in saliva samples in Sri Lanka. Hence, this study aimed to analyse the presence of *H. pylori* in the saliva of periodontitis patients in Sri Lanka using PCR and examine its association with individuals without periodontitis. Saliva samples were obtained from 28 periodontally healthy subjects (11 males, 17 females) and 40 subjects (17 males, 23 females) with periodontitis. DNA was extracted from the samples and detection of *H. pylori* was carried out by PCR amplification of the *H. pylori* 16S rRNA gene with JW22 and JW23 primers. *H. pylori* was detected in 17.5% (7/40) of saliva samples from subjects with periodontitis. Intriguingly, none of the saliva samples from periodontally healthy subjects was positive for *H. pylori*. In this study, *H. pylori* was detected significantly more often in the saliva samples from subjects with periodontitis ($p < 0.001$) compared to periodontally healthy subjects. This suggests a possible bidirectional relationship where *H. pylori* infection may increase the risk of developing periodontitis and having periodontitis may increase the risk for *H. pylori* infection.

Keywords: *Helicobacter Pylori*, Saliva, Periodontitis, Oral Cavity, PCR

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