

## Molecular detection of *Helicobacter pylori* in dental plaques of Kuwaiti diabetic patients, as a possible source of re-infection

\*Qasem JA<sup>1</sup> and Qasem AA<sup>2</sup>

<sup>1</sup>The Public Authority for Applied Education and Training, College of Health Sciences, Department of Applied Medical Sciences

<sup>2</sup>Abu-Fatira Dental Clinic, Ministry of public Health, Kuwait

**Introduction:** *Helicobacter pylori* infection is considered as one of the most prevalent infectious diseases throughout the world. The alterations of glucose metabolism in diabetes have been suggested as promoting *Helicobacter pylori* colonization. Oral infection with *H. pylori* is usually associated with *H. pylori* infection of the stomach therefore it has been speculated that oral bacteria are responsible for stomach re-infection. The objective of this study is to elucidate the prevalence of *H. pylori* infection in dental plaques of type 2 diabetic subjects with and without gastritis.

**Methodology:** Supragingival and subgingival samples were collected from 70 patients with chronic periodontitis, 15 of whom were also suffering from gastritis, 26 from diabetic, 9 from both gastritis and diabetic, and 2 from ischemic heart disease, diabetic and gastritis. The samples were analyzed by PCR using two Random sequence nt 4835-5041 primer. DNA extraction was done using the Genra PureGene DNA isolation Kit

**Results:** *H. pylori* were detected in (40%) total patients samples. The prevalence of *Helicobacter pylori* in dental plaques was (60%) in gastritis patients and (31%) in patients with diabetic only, patients with gastritis and diabetics had (56%) PCR positivity in gastritis patients with ischemic heart diseases and diabetic was 100%, control patients (healthy with no gastritis, diabetic or heart diseases) had 24% only. Also interaction of age and infection was not significant but the prevalence of *H. Pylori* in dental plaque of both diabetic and gastritis male patients were higher than female patients.

**Conclusion:** The oral cavity may be a reservoir for *H. pylori* infection and oral secretions may be an important means of transmission of this micro-organism and reinfection. It is therefore suggested that professional plaque removal and oral hygiene procedure be performed, along with the antibiotic treatment of *H. pylori*

**Keywords:** *Helicobacter pylori*; dental plaque; diabetic.