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

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**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 Gentra 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.