

## Nested Polymerase Chain Reaction for Detection of *H. pylori* in Faeces : a Promising Attempt

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**Background & Objectives:** *Helicobacter pylori* is a gram negative spiral bacterium that colonizes stomach. Infection with *H. pylori* is associated with chronic gastritis, peptic ulcer, gastric adenocarcinoma and gastric mucosa-associated lymphoid tissue lymphoma. The organism can be detected by non-invasive and invasive methods, the latter requiring endoscopy, which is tedious and non cooperative, especially in children. The present research study was carried out on the detection of this organism in feces by non invasive technique. We aimed to develop a sensitive and reproducible nested- PCR protocol to detect *H.pylori* DNA in faeces.

**Methods :** We studied a total of 24 patients with dyspeptic symptom who were referred to the endoscopic section of Tabriz children hospital during an 5 month period and stool specimen collected from these patients was frozen -70°C for further use. DNA was extracted using a DNA isolation kit (Bioneer) according to the manufacturer's instruction with minor modification. The identity of the isolated *H. pylori* was confirmed by means of nested PCR analysis of the ureA gene specific inner and outer primers.

**Results:** With nested PCR for ureA gene was found that the *H. pylori* infection 18 (75%) of 24 faecal samples, yielding amplicons of 350 bp for inner ureA gene while, 411 bp for outer ure A gene.

**Conclusion:** Non –invasive test can play a promising role in the diagnosis of *H.pylori* infection. Nested PCR was found as a surrogate methods with a sensitivity and specificity superior to that obtained by any other invasive methods and stool antigen methods.

**Keywords:** *Helicobacter pylori*; Nested PCR; Stool; Detection; UreA Gene