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Studying the Importance of *VacA* Gene of *Helicobacter pylori* in Identifying the Pathogenicity of Strains by Comparing It with the Disease Status of the Subjects

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ABSTRACT

Introduction: *H. pylori* is a primary pathogen isolated by Warren and Marshall in 1983. They called it as *Campylobacter Pylori* and in 1989 Goodwin *et al.* renamed it as *Helicobacter pylori*. *Helicobacter pylorus* is one of the responsible factors for causing gastritis, Peptic ulcer disease and is strongly associated with gastric carcinoma and gastric Malt lymphoma. Materials and Methods: In this study 300 biopsies were collected at Deccan College of Medical Sciences and Allied Hospitals, Hyderabad, India. Of these, 101 patients had peptic ulcer, 95 patients had gastritis and 4 had gastric carcinoma. A total of four gastric biopsy specimens were collected. One was used for culturing *H. pylori*, one for histological lesions and the remaining two one each from the antrum & corpus was collected in phosphate buffered saline for the DNA analysis. Results: *Helicobacter pylori* were isolated from many of the biopsies and the identification of *Helicobacter pylori* was confirmed in 200 biopsies with colony characteristics, Biochemical tests, and 16*S rRNA* amplification. The presence of *VacA* marker was detected by using appropriate primers. From the data obtained in our study, in a total of 169/200 isolates s1 region was found in 84.1% and s2 was found in 36/200 *i.e.* 18% of the isolates. In the middle region, m1awas found in 60/200 which was 30%, m1b was found in 60/200 *i.e.* 60% and m2 was found in 114/200 *i.e.* 57.1% of the isolates. Conclusion: Thus, *Vac*A detection might be helpful for determination of which patients are at highest risk for severe clinical outcomes such as duodenal ulcer, gastric ulcer or gastric carcinoma and eventually, to define strategies for the treatment or prevention of *H. pylori* infection.

KEYWORDS

Helicobacter pylori; 16*S rRNA*; *VacA*; Rapid Urease Test; Culture

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