

**PREVALENCE OF *HELICOBACTER PYLORI* AMONG
DYSPEPTIC PATIENTS ATTENDING BIR HOSPITAL,
NEPAL**

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SUBMITTED TO THE CENTRAL DEPARTMENT OF MICROBIOLOGY
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(MEDICAL)**

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ABSTRACT

Helicobacter pylori is the causative agent of chronic gastritis, peptic ulcer and gastric cancer. The purpose of this study was to determine the prevalence of *H. pylori* among dyspeptic patients in Bir Hospital. A total of 110 dyspeptic patients attending the Gastroenterology Department for upper gastrointestinal endoscopy from June to August, 2008 were enrolled. Two antral biopsy samples were collected from each patient. One of the samples was used for rapid urease test (RUT) and the other for culture. Bacterial isolates were identified by standard microbiological techniques and biochemical tests. The confirmed *H. pylori* isolates were subcultured and subjected to antibiotic susceptibility test by disk diffusion method. The sensitivity, specificity, Predictive Value Positive (PVP) and Predictive Value Negative (PVN) of RUT were determined using culture as reference (gold standard). 15 (13.6%) cases were positive by culture and 28 (25.5%) by RUT. The overall prevalence of *H. pylori* among 110 dyspeptic cases was 28 (25.5%) considering either RUT or culture positive result. The male to female ratio for *H. pylori* infection was 1.03:1. *H. pylori* infection rate was higher in the age group of 26-35 years. *H. pylori* infection rate was higher in duodenal ulcer cases. Among the 15 bacterial isolates, only 13 could be maintained in subculture. 7 (53.8%) of the 13 isolates were resistant to metronidazole, 2 (15.38%) were resistant to amoxicillin while all were sensitive to clarithromycin. The sensitivity, specificity, PVP and PVN of RUT were 100%, 86%, 54% and 100% respectively.

Key words: *Helicobacter pylori*, dyspeptic patients, prevalence, RUT, PVP, PVN

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LIST OF ABBREVIATIONS

CagA	Cytotoxin-associated protein
<i>cagA</i>	Cytotoxin-associated gene
CDC	Centres for Disease Control and Prevention
DoHS	Department of Health Services
DU	Duodenal Ulcer
ELISA	Enzyme-Linked Immunosorbent Assay
FISH	Fluorescent In-Situ Hybridization
GORD	Gastro-Oesophageal Reflux Disease
GI	Gastrointestinal
GU	Gastric Ulcer
<i>H. pylori</i>	<i>Helicobacter pylori</i>
IARC	International Agency for Research on Cancer
IVR	Initiative for Vaccine Research
MALT	Mucosa Associated Lymphoid Tissue
NCCLS	National Committee for Clinical Laboratory Standards
NIH	National Institutes of Health
NSAID	Non-Steroidal Anti-Inflammatory Drug
OMP	Outer Membrane Proteins
OPD	Outpatient Department
PCR	Polymerase Chain Reaction
PPI	Proton Pump Inhibitor
PUD	Peptic Ulcer Disease
PVN	Predictive Value Negative
PVP	Predictive Value Positive
RUT	Rapid Urease Test
UBT	Urea Breath Test
VacA	Vacuolating Cytotoxin A
<i>vacA</i>	Vacuolating Cytotoxin gene
WHO	World Health Organization

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