

ABSTRACT

Upper gastrointestinal endoscopy is a common procedure in routine clinical practice in Sri Lanka and a large number of patients undergo this procedure annually. The frequency of different types of abnormalities encountered during the procedure and their correlation with underlying pathology have not been studied sufficiently. This thesis examines the upper gastrointestinal abnormalities, their correlation with histological changes and the prevalence of *Helicobacter pylori* infection among a group of Sri Lankan patients referred for upper gastrointestinal endoscopy at a tertiary care hospital in Southern Sri Lanka. It further examines the contributory factors of upper gastrointestinal diseases and the impact of these diseases on the quality of life of affected individuals.

The study involved 251 patients who underwent routine upper gastrointestinal endoscopy at Teaching Hospital Karapitiya. Different types of abnormalities detected endoscopically were studied. Nine gastric mucosal biopsies were obtained from each patient to study the histopathology of gastric mucosa and to identify the presence of *H. pylori* using histology, rapid urease test and culture. Additional biopsies were taken when there was an associated pathology e.g. benign and malignant ulcers, polyps. Using enzyme-linked immunosorbent assay (ELISA), a sample of blood was analysed to detect anti-*H. pylori* IgA and IgG antibodies in the plasma. Three case control studies were performed by comparing patients with peptic ulcer disease, gastro-oesophageal reflux disease and gastritis with age and sex matched, hospital based control groups to assess the risk and protective factors for each disease entity. The quality of life of patients presented with upper gastrointestinal symptoms was compared with a control group using the validated Sinhala translation of WHO Quality of Life BREF questionnaire.

Age of the subjects ranged from 15 to 84 years. Approximately 86% of patients had an endoscopically detected abnormality either in the oesophagus, stomach or duodenum or in combination. Endoscopically detected gastritis (29.1%), gastric ulcer (22.3%) and erosive oesophagitis (17.9%) were the three commonest abnormalities detected. Duodenal

abnormalities were rare (5.2%) among the group of patients studied. Approximately 86% of patients had histological evidence of chronic gastritis. However the correlation between endoscopic and histological gastritis was poor with more than 60% of patients with histological gastritis failing endoscopic detection. The prevalence of *H.pylori* determined by histology was 49.4%. When compared with histology which was taken as the Gold standard for the detection of *H.pylori*, all other *H.pylori* detection techniques had low sensitivity and specificity. Culture yielded a low sensitivity showing its limitations in the diagnosis of infection in our setup. The particular serology test used had no value as a screening test in our population as it was associated with low sensitivity (5%).

In the three case control studies, when compared with the high socio economic group, people in the middle group had lesser tendency to develop peptic ulcer disease, gastro-oesophageal reflux disease and gastritis. Smoking had no effect on any of the disease categories studied while alcohol consumption was associated with increased risk of gastro-oesophageal reflux disease and gastritis. The use of antirheumatics, analgesics and antibiotics increased the risk of gastritis and gastro-oesophageal reflux disease (GORD) while the use of analgesics and antirheumatics increased the risk of peptic ulcer disease. Bad food habits such as missing or delaying meals, frequent consumption of spicy, acidic or starchy food increased the risk of gastritis and gastro-oesophageal reflux disease while missing or delaying meals had significant impact on peptic ulcer disease.

In the assessment of quality of life, the patients showed significantly low scores in physical and psychological domains when compared with the control group. Although social and environmental domains showed similar trend, the differences between two groups were not significant.

This study shows that a majority of patients referred for upper gastrointestinal endoscopy in our population had a clinically relevant abnormality. There was a relatively a low prevalence of *H.pylori* infection among our patients compared to our neighboring South Asian developing countries. Histological evaluation of biopsies stained with Haematoxylin &

Eosin (H & E) or Modified Giemsa stains appeared to be the most reliable technique to detect *H.pylori*. Practically, histology required expertise of trained endoscopist and histopathologist and was the most expensive out of all detection methods. Bad food practices, commonly used drugs in day today life and alcohol consumption were significant risk factors for upper gastrointestinal diseases among this group of patients. The symptoms significantly affect the quality of life of patients on physical and psychological domains.