5.4 Validation of a Gastro-oesophageal Reflux Disease (GERD) - Specific Screening Instrument for Epidemiological Purposes.

Department of Physiology, Faculty of Medicine, University of Kelaniya
Department of Public Health, Faculty of Medicine, University of Kelaniya
Department of Pharmacology, Faculty of Medicine, University of Kelaniya
Department of Medicine, Faculty of Medicine, University of Kelaniya

ABSTRACT

Introduction: The prevalence of GERD is increasing worldwide: the community prevalence in Sri Lanka is not known.

Objectives: To develop a practical clinical score to screen for GERD in the community and assess whether a score using both symptom frequency and severity correlates better to an objective measure of GERD than one using only symptom frequency.

Methodology: 100 patients (endoscopy positive - which included patients with all grades of oesophagitis) and 150 controls (comparable in age and gender) faced a GERD-specific interviewer-administered questionnaire assessing seven upper gastro-intestinal symptoms. Each symptom was graded using Likert scales for frequency (4-items) and severity (5-items) and two scores were generated. Score 1 being the sum of frequency of symptoms while score 2 was the sum of products of frequency and severity of each. All patients then underwent 24-h ambulatory pHmetry. Both symptom scores were compared against 24-h pHmetry parameters as it is considered the gold standard to diagnose GERD. Cut-off values were determined by receiver-operating characteristic curves.

Results: For both scores, mean scores of cases were significantly higher than controls (p=0.000). The cut-off score for score 1 was ≥ 10.50 (sensitivity 92.0%; specificity 78.7%; area under the curve – 0.937). The cut-off score for score 2 was ≥ 12.50 (sensitivity 90.0%; specificity 78.0%; area under the curve – 0.929). Both showed high reproducibility (Intra class correlation coefficient score1: 0.94 and score2: 0.82). There was good correlation between both symptom scores and 24-h pHmetry parameters (Spearman rank correlation, p=0.01), but score 2 showed a significantly better correlation.

Conclusion: Our GERD questionnaire is valid, reproducible and showed better correlation with an objective test when both severity and frequency of symptoms were scored than frequency alone.