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

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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.