Esophageal High Resolution Manometry (HRM) in Systemic Sclerosis: Correlation With University of California Los Angeles Scleroderma Clinical Trial Consortium GIT 2.0 (UCLA SSc_GIT 2.0) Questionnaire.

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Abstract:

SSc_GIT 2.0 is a validated disease-specific HRQOL instrument for evaluation of GIT-related activity and severity in systemic sclerosis (SSc). Aim: We studied HRM in SSc patients and the correlation of findings to the UCLA SSc_GIT 2.0 scores. Methods: Forty SSc patients administered UCLA SSc GIT 2.0 that includes multi-item scales: reflux, distention, diarrhea, fecal soiling, constipation, emotional well-being, social functioning, and total GIT score. Twenty out of 40 patients underwent esophageal HRM study (Solar GI MMS). HRM studies were analyzed for LES resting and residual pressures, esophageal amplitude and peristalsis integrity, duration and velocity of distal esophageal contraction, and UES resting and residual pressures. HRM data were compared with 15 healthy volunteers. Stepwise multiple linear regression analysis was done to test if HRM parameters could predict UCLA SSc_GIT 2.0 variables. Results: Forty patients (32 females), mean age 46 +/- 7 years, mean disease duration 9.3 +/- 7 years, reported upper (85.7%) and lower GI symptoms (75%), while 5% reported no symptoms. 31 patients had diffuse cutaneous systemic sclerosis (dcSSc), and 9 had limited cutaneous systemic sclerosis (lcSSc). Mean (SD) score of UCLA SSc_GIT 2.0 items for those who underwent HRM were as follow: reflux 1.2 +/- 0.8, distention 1.6 +/- 1.2, fecal soiling 0.3 +/- 0.9, diarrhea 0.8 +/- 1, social 1 +/- 1, emotional 1 +/- 1.1, constipation 0.5 +/- 0.9, and total GIT score 0.9 +/- 0.6. LES resting pressure and distal esophageal amplitude were significantly lower in SSc patients than control (table 1). Main manometric findings were decrease LES resting pressure (40%), aperistalsis (40%), small and large peristaltic breaks in mid and distal esophagus (55%), and low amplitude of proximal esophagus (25%) of patients. While, normal manometric findings were found in (15%) of SSc patients. Regression analyses showed distal esophageal amplitude and LES resting pressure negatively correlated with reflux score (r= -0.64; p< 0.001 and r= -0.46; p< 0.019 respectively), and total GIT score (r= -0.54; p= 0.007 and r= -0.42; p=0.03 respectively). While LES resting pressure only had negative correlation with diarrhea score (r= -0.062 p=0.002). No correlation was found between other HRM parameters and symptoms score. Conclusion: LES resting pressure and distal esophageal amplitude correlate with the UCLA SSc_GIT 2.0 questionnaire, and can be a predictor of the GIT affection in SSc. HRM parameters among SSc patients and control.

Keywords:

systemic sclerosis, High resolution manometry, esophageal motility, esophageal reflux, symptoms correlations.

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