

DISCRIMINANT ABILITY OF COMMONLY USED DIAGNOSTICS TESTS IN FUNCTIONAL DYSPEPSIA

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Introduction:

Gastric emptying (GE), drink tests and electrogastrography (EGG) are commonly used to evaluate upper digestive physiology in pts with functional dyspepsia (FD). As the clinical utility of these tests remains unproven, we determined their performance characteristics in pts with FD and controls.

Methods: Healthy subjects and pts meeting Rome II criteria for FD underwent GE and EGG with water load (WL). GE was performed using ^{13}C -*Spirulina platensis* breath tests. EGG was performed using a single channel recording system. WL was performed with a 5-minute *ad lib* drinking protocol. During WL subjects rated symptoms (SXS) of nausea, bloating and fullness at baseline and at 10- 20- and 30-minutes after WL. Sxs were rated on a 4-point Likert scale; the total sx score could range from 0-48. ROC curves were calculated for GE, WL and SXS. Sensitivity and specificity of EGG was calculated.

Results: 26 ctrls and 56 FD pts were studied. For ctrls, the mean(SE) T1/2 of GE was 84(\pm 2) minutes compared with 95(\pm 2) minutes for FD ($p=0.008$). ROC curve displays modest ability to discriminate ctrls and FD (area=0.70). FD were 4.2 (1.2-14.2) times as likely as ctrl to have abnl EGG. In discriminating FD from ctrls, EGG had a sensitivity of 0.47 and a specificity of 0.83. The positive predictive value of EGG was 0.85. SXS also modestly discriminated ctrls from FD (ROC area=0.63). A total sx score >7 provided 95% sensitivity and 45% specificity in discriminating FD from ctrls. WL had excellent discriminate characteristics (area=0.83). WL $<350\text{ml}$ had a sensitivity of 96% and specificity of 51%.

Conclusions: WL and EGG have the greatest ability to discriminate FD from ctrls. Sxs during WL displayed modest discriminative ability while GE was the poorest discriminator of the evaluated tests.

