



Endoscopic measurement of intraluminal pressure of upper digestive tract in functional dyspepsia

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Abstract

AIM: The intraluminal pressure of various portions of the upper digestive tract was measured with transducer manometer in a group of 16 functional dyspepsia patients and a control group of 19 healthy volunteers to investigate their clinical significance. The types of FD cases were esophageal reflux type 6 cases, ulcer type 3 cases. Motility disorder type 5 cases, aerophagia type 1 cases and idiopathic type 1 case.

METHODS: The regime of observation consisted gastroendoscopy, pathological examination of gastric mucosa and *Hp* urease test. The intraluminal pressure of duodenal bulb, pyloric region, gastric cavity, cardial region and lower segment of esophagus were measured serially with SGY-3 transducer manometer during gastroendoscopy. The pressure value and pressure curve were recorded. The values of both groups were treated with *t* test.

RESULTS: The intraluminal pressure of duodenum and lower esophagus of FD group showed no significant difference statistically with that of control group. The intraluminal pressures of pyloric region, gastric cavity and cardial region were 1.82 ± 0.38 vs 2.48 ± 0.83 ; 1.872 ± 0.88 vs 2.32 ± 0.50 ; And 2.28 ± 0.50 vs 2.36 ± 0.42 , respectively. FD group ($P < 0.05$) showed marked pressure lowering. The gastroscopic manifestations were mild and light inflammation of gastric mucosa. Positive rate of *Hp* was 63.1%.

CONCLUSION: Endoscopic measurement of intraluminal pressure with SGY-3 type transducer manometer has the merits of accurate localization, recording pressure curve stably and is helpful in diagnosing motility disorders of the GI tract. The depression of intraluminal pressure observed in this study may play an important role in influencing the formation and progression of FD. The depression of intraluminal pressure is considered to be correlated with *Hp* infection and gastric mucosa inflammation. Regulation of intraluminal pressure should be stressed in the treatment of FD.

Key words: Functional dyspepsia; Endoscopic examination; Gastrointestinal manometry

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