

Investigation of the extent of gastric metaplasia in the duodenal bulb by using methylene blue staining.

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摘要

Abstract

BACKGROUND AND AIMS: The existence of gastric metaplasia (GM) of the duodenal mucosa has been considered to be highly related to the recurrence of duodenal ulcers (DU). The aims of this study are to evaluate the usefulness of methylene blue staining in the detection of GM, and to clarify the relationship between GM and the deformity of the duodenal bulb. **METHODS:** Fifteen patients with healed DU and four patients with symptoms of dyspepsia without evidence of ulcers were enrolled into this endoscopic study. During each endoscopy, methylene blue was sprayed evenly on the duodenal bulb, and biopsies were taken from blue-stained and unstained areas. The existence and extent of GM were assessed histologically and grossly. The correlation between duodenal bulb deformity and the extent of GM was also studied. **RESULTS:** The mean score of methylene blue non-staining (MBNS) was 0, 1.30 +/- 0.15, and 3.00 +/- 0.00 in group A (non-ulcer patients), group B (patients with healed DU and with normal-shaped bulb) and C (patients with healed DU and with deformed duodenal bulb), respectively; showing significant differences among the groups ($P < 0.05$ in each). Both the existence and the grading of GM were higher in unstained specimens than in blue-stained specimens (100 vs 16.6%, $P < 0.0001$ and 3.62 +/- 0.09 vs 0.19 +/- 0.06, $P < 0.001$, respectively). **CONCLUSIONS:** Methylene blue non-staining can be applied to investigate the existence and extent of GM in the duodenal bulb accurately. The incidence of GM in the duodenal bulb was higher in patients with healed ulcers than in non-ulcer patients. Patients with deformed duodenal bulbs have a higher extent of GM than those without deformed duodenal bulbs.