



Pyloric sphincter reconstruction in Billroth I gastrectomy

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Abstract

AIM: To search for a new surgical method which accords with physiologico-anatomical principles, reduce the incidence rate of some postoperative complications in conventional Billroth I (CB1) gastrectomy and raise the life quality of patients after surgery.

METHODS: Using the blood vessels and innervation of the remaining stomach and duodenum, we designed a new pyloric sphincter reconstruction (PSR) in Billroth I gastrectomy, in which the end of

the duodenum remnant is surrounded by the seromuscular valve of 2 cm wide in the end of the greater curvature, thickened the muscle of the stoma and reconstructed a similar pylorus with the sphincteric function.

RESULTS: Eleven patients were treated, 8 males and 3 females, 6 malignant and 5 benign and 1 accompanied by mould infection, aged from 33 to 73 years, with 1 to 29 years of gastric disease history (average 7.9 years). The function of gastric emptying was shown to be essentially normal by barium meal study with video record one month after the operation. The pyloric-like control effect was present in the reconstructive pylorus. PSR vs CB1 vs NES ($P > 0.01$); PSR vs CB1 ($P < 0.01$); PSR vs NSE ($P > 0.05$).

CONCLUSION: The new method of pyloric reconstruction is safer, simpler and more effective than conventional procedures. This method can be applied to all patients for whom Billroth 1 anastomosis can be performed regard less of benign or malignant lesion.

Key words: Pyloric sphincter reconstruction; Gastrectomy/method; Case report

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