

Ileocolic esophageal replacement in children with benign stricture of esophagus

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Abstract

AIM: To treat esophageal stricture secondary to the ingestion of corrosive materials in children using the ileocolon with ileocecal valve as a substitute for esophagus.

METHODS: Between 1992 and 1999, isoperistaltic retrosternal ileocolic esophageal replacements were performed in 12 patients; 50 cadavers were studied to observe the vascularity in the ileocolic region and metabolic indexes were measured before and after surgery or between the operative group and the normal controls in 20 piglet models.

RESULTS: A follow-up of 3 years in the 12 cases found no death in intra and Post operative period clinically. Cervical ileoesophageal anastomotic leaks occurred in 2 cases. The distribution pattern of venous vessel in the ileocolic region was far more constant than that of the artery. The arrangements of artery in the ileocolic segment were classified into 7 types, and there was no interruption of paracolic anastomosis between arteries. The resections of 50 cm terminal ileum, cecum and 50 cm ascending colon affected enterohepatic circulation of bile acid (bile salt) and the fatty metabolism in early period after surgery in piglet models. Shortening of the time and reducing of the area for water absorption after ileocolic resection resulted in diarrhea in piglet models. The loss of "bacterial barrier" role of ileocecal valve led to bacteria immigration from colon to ileum and small intestinal bacterial overgrowth.

CONCLUSION: The ileocolic esophageal replacement taking advantage of antireflux role of the ileocecal valve has obtained satisfactory effect. To understand the characteristics of the patterns of arteries and veins distribution and physiological functions of the ileocolic segment is useful in guiding clinical practice and postoperative management and preventing postoperative complications as well.

Key words: Esophageal stenosis/in infancy and childhood; Esophageal stenosis/therapy; Ileocecal valve; Ileocolic esophageal replacement

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