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Does anastomotic method affect functional outcome of low anterior resection for rectal carcinoma?

Jiang JK, Lin JK.
Source

Department of Surgery, Veterans General Hospital-Taipei, Taiwan, R.O.C.

Abstract

BACKGROUND:
Anorectal dysfunction may occur following sphincter-saving resection for rectal carcinoma. The dysfunction may present clinically with increased stool frequency and varying degrees of fecal incontinence. It is postulated that these presentations come about from reduced neorectal capacity, as well as internal anal sphincter injury, during transanal instrumentation or through damage to the nerve supply in the course of rectal dissection. The purpose of this study was to assess the functional results of low anterior resection (LAR), and the relative importance of each mechanism.

METHODS:
Thirty-one patients were included in this study, eighteen of whom had standard LAR for rectal carcinoma. Bowel continuity was reestablished by handsewn (HS) 2-layer suture in 10 patients and stapled EEA (U.S. Surgical Corporation) anastomosis in the other 8 patients. Thirteen patients who had received abdominal surgery other than LAR were the control group. Anorectal manometry was performed preoperatively and one week, then six months post-operatively. Clinical assessment was done pre-operatively and six months post-operatively.

RESULTS:
Resting anal pressure was significantly reduced in both HS and EEA groups post-operatively (HS: 69.4 +/- 14.8 mmHg, median: 71.5 mmHg vs. 43.7 +/- 16.2 mmHg, median: 48.5 mmHg, 95% confidence interval of mean difference: 6.4-24.6 mmHg; EEA: 51.3 +/- 14.6 mmHg, median: 48.0 mmHg vs. 38.8 +/- 16.6 mmHg, median: 41.5 mmHg, 95% confidence interval of mean difference: 5.6-49.8 mmHg), partial recovery was noted in the HS group six months later. The squeeze pressure and functional length of the anal canal showed no difference pre- and post-operatively. Rectoanal inhibitory reflex was present in 90% of the patients preoperatively, but in only 70% of the HS, and 38% of the EEA group, six months post-operatively. Clinically, increased bowel frequency and varying degrees of incontinence were experienced postoperatively. There was no difference in bowel frequency between the two groups, but worse continence grade was seen in the EEA group.

CONCLUSIONS:
LAR for rectal carcinoma resulted in impaired anorectal function. Handsewn anastomosis seemed to have a better functional outcome than EEA stapled anastomosis.