

Comparison of Long-Term Functional Results of Colonic JPouch and Straight Anastomosis After Low Anterior Resection for Rectal Cancer: A Five-Year Follow-Up

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PURPOSE Few reports on the long-term functional outcome of colonic J-pouch reconstruction have been published, and data comparing J-pouch and straight reconstruction are contradictory. This prospective study compares the functional outcome of colonic J-pouch and straight anastomosis five years after low anterior resection for rectal cancer.

METHODS Functional outcome was compared in 46 patients with J-pouch reconstruction (J-group) and 48 patients with straight anastomosis (S-group). Clinical status was evaluated with a 17-item questionnaire inquiring about different aspects of bowel function. Reservoir function was evaluated by manovolumetry. The Fisher's exact test and Wilcoxon's rank-sum test were used to compare categorical and quantitative data, respectively.

RESULTS Among patients with an ultralow anastomosis (4 cm from the anal verge), the number of bowel movements during the day (5, 4.3 vs. 29.2 percent; $P = 0.028$) and at night (>1/week, 4.3 vs. 33.3 percent; $P = 0.013$) and urgency (4.3 vs. 33.3 percent; $P = 0.013$) and soiling (21.7 vs. 50.0 percent; $P = 0.043$) were less in the J-group than in the S-group. Among patients with a low anastomosis (5 to 8 cm from the verge), patients in the J-group had fewer bowel movements at night (>1/week, 0 vs. 20.8 percent; $P = 0.028$) and less urgency (0 vs. 20.8 percent; $P = 0.028$). Reservoir function was better in the J-group than in the S-group in both the ultralow (maximum tolerable volume (mean), 101.7 vs. 76.3 ml; $P = 0.004$; threshold volume (mean), 46.5 vs. 30.4 ml; $P < 0.001$; compliance (mean), 4.9 vs. 2.5 ml/cm H₂O; $P < 0.001$) and low-anastomosis (maximum tolerable volume, 120.4 vs. 97.9 ml; $P < 0.001$; threshold volume, 58.3 vs. 40.8 ml; $P < 0.001$; compliance, 5.2 vs. 3.1 ml/cm H₂O; $P < 0.001$) groups.

Conclusions J-Pouch reconstruction increased reservoir function and provided better functional outcome than straight anastomosis, even five years after surgery, especially in patients whose anastomosis is less than 4 cm from anal verge.