

89P Prevention and management of low rectal anastomotic leakage in the robotic era: A propensity score matched study

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Background: Anastomotic leakage (AL) is a severe complication of robotic low anterior resection (LAR) for rectal cancer, and effective prevention is urgently needed. In the robotic era, to evaluate the role of innovative techniques that prevented AL in rectal cancer patients undergoing robotic LAR.

Methods: From September 2012 to September 2017, a total of 581 patients underwent robotic LAR, with 131 patients participated as control subjects (non-PST group) and 450 patients were subjected to PST techniques. After propensity scores adjusted for potential bias, the AL rate, short-term and long-term outcomes were compared between the two groups.

Results: The overall rate of AL was 7.1% out of 581 patients, with Grade B at 6.2% and Grade C at 0.9%, using the ISREC grading system. After matching propensity scores, the PST group presented improvement in both overall AL (5.0% vs 10.7%, $P = 0.034$) and major AL (0.4% vs 3.1%, $P = 0.044$) compared with the non-PST group, respectively. Furthermore, the PST group had lower surgical complications (13.6% vs 21.6%, $P = 0.014$) and reoperation rates (0.8% vs 4.6%, $P = 0.019$) compared with the non-PST group, respectively. Long-term oncological outcomes were not significant in the two groups. By multivariate regression models, we demonstrated that distance of anastomosis from anal verge < 5 cm, distance of distal resection margin from tumor < 2 cm, estimated blood loss ≥ 100 mL and non-PST technique were risk factors of AL in robotic LAR.

Conclusions: Avoiding routine diverting stoma, the innovative PST techniques may shed light on an effective method for preventing occurrence of AL in robotic LAR.

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