

Transanal Endoscopic Total Mesorectal Excision: Technical Aspects of Approaching the Mesorectal Plane From Below--A Preliminary Report

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Abstract

Background: Laparoscopic total mesorectal excision (TME) for low rectal cancer can be technically challenging. This report describes our initial experience with a hybrid laparoscopic and transanal endoscopic technique for TME in low rectal cancer.

Methods: Between December 2012 and October 2013, we identified patients with rectal cancer < 5 cm from the anorectal junction (ARJ) who underwent laparoscopic-assisted TME with a transanal minimally invasive surgery (TAMIS) technique. A standardized stepwise approach was used in all patients. Resection specimens were examined for completeness and measurement of margins. Preoperative magnetic resonance imaging (MRI) characteristics and short-term postoperative outcomes were examined. All values are mean \pm standard deviation.

Results: Ten patients (8 males; median age: 60.5 (range 36-70) years) were included. On initial MRI, all tumors were T2 or T3, mean tumor height from the ARJ was 28.9 ± 12.2 mm, mean circumferential resection margin was 5.3 ± 3.1 mm, and the mean angle between the anal canal and the levator ani was $83.9^\circ \pm 9.7^\circ$. All patients had had preoperative chemoradiotherapy, TME via TAMIS, and distal anastomosis. There were no intraoperative complications, anastomotic leaks, or 30-day mortality. The pathologic quality of all mesorectal specimens was excellent. The distal resection margin was 19.4 ± 10.4 mm, the mean circumferential resection margin was 13.8 ± 5.1 mm, and the median lymph node harvest was 10.5 (range 5-15) nodes.

Conclusions: A combined laparoscopic and transanal approach can achieve a safe and oncologically complete TME dissection for low rectal tumors. This approach may improve clinical outcomes in these technically difficult cases, but larger prospective studies are needed.