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Transanal Total Mesorectal Excision: International Registry Results of the First 720 Cases

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Abstract

Objective: This study aims to report short-term clinical and oncological outcomes from the international transanal Total Mesorectal Excision (taTME) registry for benign and malignant rectal pathology.

Background: TaTME is the latest minimally invasive transanal technique pioneered to facilitate difficult pelvic dissections. Outcomes have been published from small cohorts, but larger series can further assess the safety and efficacy of taTME in the wider surgical population.

Methods: Data were analyzed from 66 registered units in 23 countries. The primary endpoint was "good-quality TME surgery." Secondary endpoints were short-term adverse events. Univariate and multivariate regression analyses were used to identify independent predictors of poor specimen outcome.

Results: A total of 720 consecutively registered cases were analyzed comprising 634 patients with rectal cancer and 86 with benign pathology. Approximately, 67% were males with mean BMI 26.5 kg/m. Abdominal or perineal conversion was 6.3% and 2.8%, respectively. Intact TME specimens were achieved in 85%, with minor defects in 11% and major defects in 4%. R1 resection rate was 2.7%. Postoperative mortality and morbidity were 0.5% and 32.6% respectively. Risk factors for poor specimen outcome (suboptimal TME specimen, perforation, and/or R1 resection) on multivariate analysis were positive CRM on staging MRI, low rectal tumor <2 cm from anorectal junction, and laparoscopic transabdominal posterior dissection to <4 cm from anal verge.

Conclusions: TaTME appears to be an oncologically safe and effective technique for distal mesorectal dissection with acceptable short-term patient outcomes and good specimen quality. Ongoing structured training and the upcoming randomized controlled trials are needed to assess the technique further.