The value of transanal endoscopic intersphincteric resection (taE-ISR) in extreme anal preservation in ultra-low rectal cancer: A single-center retrospective study

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Background

The Intersphincteric resection (ISR) technique is an alternative for anal preservation in ultra-low rectal cancer. The transanal total mesorectal excision (TaTME) technique might compensate for the deficiencies of ISR in terms of tumor spillage and poor surgical field exposure. Thus, we decided to perform ISR through a transanal endoscopic approach (taE-ISR), seeking to evaluate the value of this innovative technique in extreme anal preservation in ultra-low rectal cancer.

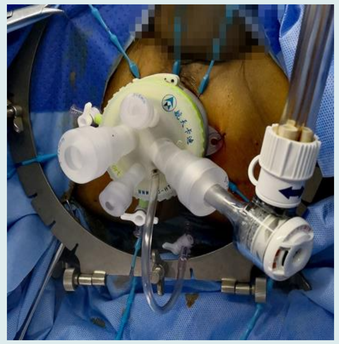
Methods

25 patients underwent taE-ISR from July 2018 to March 2021 were retrospectively enrolled. During the procedure, a transanal port was utilized. All the patients underwent a part of ISR followed by a purse-string suture, and then proceeded to complete ISR afterwards. Patients baseline characteristics, perioperative outcomes, pathological outcomes and short-term follow-up were investigated.

	Age (years)	Tumor distance from the anal verge (cm)	Neoadjuvant chemoradiotherapy		Operative time (min)	Intraoperative blood loss (ml)	negative DRM	Negative CRM	Postoperative complications		Anal preservation rate
			Yes	No					Anastomotic leakage	Defecation disorders	
Patients underwent taE-ISR (n=25)	48 (29.0 to 63.0)	3.6 (2.5 to 5.0)	8 (32%)	17 (68%)	160 (130.0 to 230.0)	80 (30.0 to 120.0)	25 (100%)	25 (100%)	3 (12%)	5 (20%)	22 (88%)

Results

The median tumor distance from the anal verge was 3.6cm (range 2.5 to 5). The median operative time was 160 min (range 130 to 230). The median intraoperative blood loss was 80ml (range 30 to 120). Negative circumferential resection margin (CRM) and distal resection margin (DRM) were reached in all patients. After surgery, three (12%) cases suffered anastomotic leakage and five (20%) patients developed defecation disorders. The failure rate of anal preservation was 12%, including two (8%) cases converting to abdominoperineal resection (APR) and one (4%) case incompetent to receive stoma closure due to anastomotic stenosis.





Conclusion

the taE-ISR technique combines the advantages of TaTME in terms of surgical field exposure with the benefits of ISR in surgical precision. The implementation of taE-ISR seems safe and effective, and the role it plays in extreme anal preservation of ultra-low rectal cancer should be taken into account.