TRANSANAL/TRANSPERINEAL TME WITH CONSIDERATION OF INDICATIONS BEYOND STANDARD TME

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Background

Transanal total mesorectal excision (TaTME), including transperineal abdominoperineal resection (APR), was developed to overcome the technical challenges of laparoscopic surgery for low rectal cancer.

With the increasing adoption of robotic surgery, abdominal dissection and transection around the rectum have become more feasible, and the overall indications for TaTME have declined. However, TaTME remains particularly useful in advanced rectal cancers with recurrence or adjacent organ invasion.

To ensure the safe application of transanal/transperineal (Ta/Tp) approaches in such complex cases, we have standardized the operative procedure and carefully defined indications for clinical practice.

Our indication for TaTME

Intersphincteric resection ***ISR***

(Male) Abdominoperineal resection ***APR***

Total pelvic indication ***TPE***

Resection for local recurrence

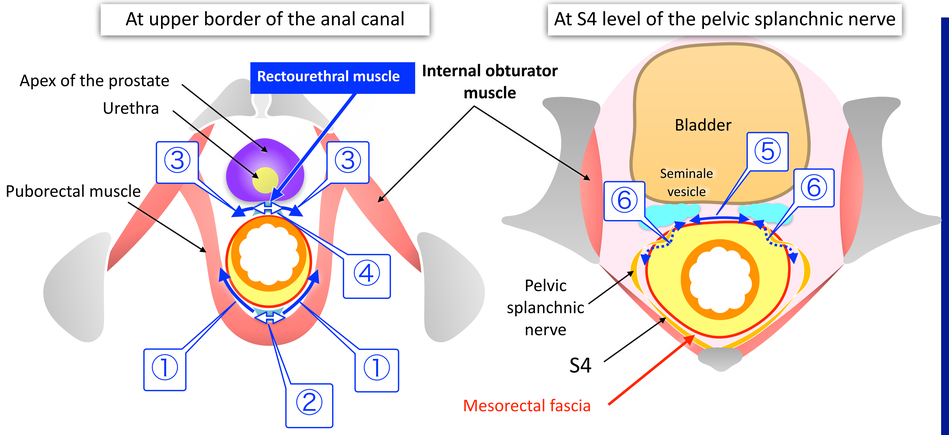
Basic

Advanced

By establishing TaTME as a standardized procedure in routine practice, it becomes applicable to advanced cases.

Operating room setup

Procedure for TaTME



① Dissect the mesorectal fascia at the 5 and 7 o'clock positions.

② Dissect the rectococcygeal muscle.

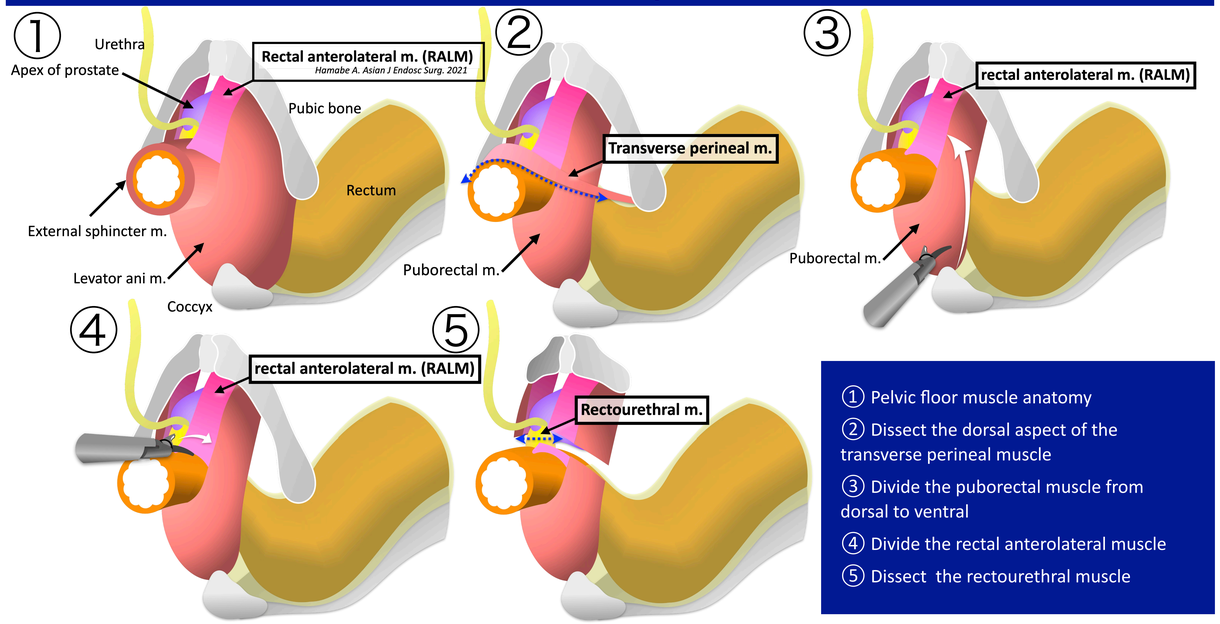
③ Identify the dorsal aspect of the prostate at the 1 and 11 o'clock positions.

④ Dissect the rectourethral muscle.

⑤ Dissect the dorsal aspect of the prostate.

⑥ Dissect the apex of the neurovascular bundle elevated by rectal traction.

Procedure for TpAPR



① Pelvic floor muscle anatomy

② Dissect the dorsal aspect of the transverse perineal muscle

③ Divide the puborectal muscle from dorsal to ventral

④ Divide the rectal anterolateral muscle

⑤ Dissect the rectourethral muscle

Aim

To evaluate the surgical outcomes of the standardized Ta/Tp approach at our institution.

Results

TaTME was performed in 60 cases between April 2022 and May 2025.

47 patients excluding IBD were analyzed.

Patient characteristics	
Sex (Male/Female)	41/6 cases
Age, median (range)	68 (32-80
BMI, median (range) (Kg/m2)	22.6 (16.2-30.7) Kg/m2
Tumor characteristics	
Primary/Recurrence	41/6 cases
Neoadjuvant therapy (None/TNT/CRT/NAC/Carbon-ion radiotherapy)	17/16/8/5/1例

Surgical results

		Time to resection	Blood loss
Primary	ISR (N=19)	166 (76-307) min	60 (0-342) ml
	APR (N=17)	184 (118-480) min	70 (0-630) ml
	TPE (N=5 including 3 cases of posterior TPE)	488 (338-564) min	200 (60-480) ml
Recurrence (N=6)		497 (295-1073) min	350 (70-910) ml

Conclusion

Based on the standardized TaTME technique, safe application of Ta/Tp approaches is feasible even for indications extending beyond conventional TME, including advanced and recurrent rectal cancers.