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Trans-Anal Minimally Invasive Surgery (TAMIS) for Completion Excision of Localized Well-Differentiated Rectal Neuroendocrine Tumours

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BACKGROUND: Rectal NETs (R-NETs) <2cm are often amenable to endoscopic attempts at resection, but initial resections are often incomplete, and extended monitoring or radical surgery may then be required. Trans-anal minimally invasive surgery (TAMIS) allows resection of rectal tumours while reducing surgical morbidity. Data on its use in R-NETs is scant. We aimed to assess the results of TAMIS for completion local excision of R-NETS following endoscopic resection.

METHODS: We reviewed patients undergoing TAMIS for NET at our institution (2013-2017). Included patients had incomplete endoscopic resection (margin ≤1mm), a visible scar on repeat endoscopy, and localized disease on systemic imaging. Full-thickness resection of the endoscopic scar was performed. Outcomes were 30-day major morbidity (Clavien-Dindo III-V), resection margin, and oncological outcomes.

RESULTS: All seventeen patients included had G1 R-NETs. The reasons for completion excision were initial R2 resection (12), R0 resection with close margins (3), and fragmentary resection (2). Median distance from the anal verge was 7 (range 5-13) cm. Median operating time was 41.5 (range 20-79) minutes. No major morbidity was documented. Viable tumour was found in 4 specimens, all Grade 1 with negative margins. At 18 months median follow-up, all patients were

alive and asymptomatic, with no change in sphincter function and no evidence of local recurrence.

CONCLUSION: TAMIS is a safe and feasible approach for well-differentiated R-NETs to clear margins following incomplete endoscopic resection. It limits invasiveness of intervention and avoids time-consuming monitoring after incomplete resection.