

## [Rectal Cancer](#)

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### **Is Transanal Endoscopic Microsurgery Adequate in the Removal of Rectal Lesions?**

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**Introduction:** Transanal endoscopic microsurgery (TEM) was developed by G. Buess in 1983 as a minimally invasive surgery for the removal of anorectal lesions that cannot be excised by conventional transanal instruments. TEM uses specialized equipment including an operating proctoscope and insufflator to form an airtight system. We reviewed the experience of a single surgeon using this technique at our institution.

**Methods:** A retrospective and prospective review of all patients who underwent TEM between November 2002 and April 2007 by a single surgeon at our institution was performed. One hundred thirteen patients were identified.

All 113 patients had a preoperative enema. Those with rectal lesions also underwent rectal endoscopic ultrasonography (REUS). A single dose of preoperative cefazolin and metronidazole was given before the start of all procedures. All patients were followed with flexible sigmoidoscopy at 1, 6, and 12 months.

**Results:** A total of 113 patients underwent TEM excision between November 2002 and April 2007. Diagnoses included benign adenomas (64.6%), carcinoid tumors (14.6%), T1 cancers (18.8%), and a small number of T2 cancers (2.1%). The mean distance from the anal verge was 16 cm.

Mean operative time was 79 minutes (range, 48-170 minutes). The average blood loss was 100 cc. The average length of hospital stay was less than 24 hours; 92 patients went home the same day. The longest length of stay was 7 days for a patient who had a long segment of carpet adenomas between 14-16 cm and the peritoneum was entered and subsequently closed. However, postoperatively, there was a question of peritoneal signs and the patient was explored. No spillage was found but the presence of clots was found. In one case, the procedure could not be completed due to a tortuous rectum and the patient underwent a low anterior resection instead.

Two patients experienced postoperative bleeding that stopped without intervention and did not require transfusion. One patient developed a hematoma that drained on its own. In all cases, postoperative pain was controlled with oral narcotics. Eight patients had a recurrence of their lesion.

**Discussion:** Endoscopic removal of adenomatous colorectal polyps during diagnostic procedures is the first-line treatment of such lesions. It is efficient, safe, relatively inexpensive, and associated with the lowest complication rate. However, this is not always possible due to size and/or location limitations. Additionally, adenomas in the middle or upper rectum are difficult to remove using standard transanal excision instruments.

In our series, only 5 of 113 patients (4%) experienced any type of complication. These consisted of bleeding and hematoma. This finding is consistent with other evidence in the literature.

TEM is an effective treatment for lesions between 6-18 cm. We believe that it is less invasive than abdominal surgery or the Kraske procedure. The need for conversion and the complication rates are low. It is a useful tool for surgeons to excise lesions that cannot be reached by traditional transanal instruments. Of the 8 patients who had recurrences, 6 were benign while 2 were malignant. The 2 patients with malignant recurrences were not candidates for abdominal surgery due to their comorbidities. TEM is adequate for the removal of rectal lesions, providing the patients are appropriate candidates for the procedure.