

Leiomyosarcoma of the Rectum: The First Report of Effective Treatment with Endoscopic Submucosal Dissection

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Abstract

Background: Rectal leiomyosarcoma (LMS) is an extremely rare smooth muscle tumor accounting for <0.1% of all rectal neoplasms.¹ Because of its rarity, there is no current consensus on the adequate therapeutic strategy.² This video demonstrates an LMS of the rectum treated effectively with endoscopic submucosal dissection (ESD).

Methods/Results: A 68-year-old male patient underwent a screening colonoscopy that identified a 3 cm submucosal tumor in the lower rectum, 5 cm above the anal verge. Endoscopic ultrasonography

showed a hypoechoic, homogenous, well-defined mass arising from the deep mucosa layer. Tissue sample was obtained with fine-needle aspiration that showed mesenchymal myoid cells that did not stain for CD117, chromogranin, or synaptophysin. Smooth muscle actin (SMA) was focally positive. Hence, the presumed diagnosis was a submucosal leiomyoma. An ESD was effectively performed with *en bloc* resection and no immediate or late complications. The total length of procedure was 225 minutes. Histology showed a cellular spindle cell neoplasm having variable eosinophilic cytoplasm and mild atypical tapering or more cigar-shaped nuclei with scattered mitotic figures. The resection specimen had tumor-free margins despite an infiltrative growth pattern. Immunohistochemistry showed diffusely positive staining for SMA and desmin, while negative for S-100 protein, GFAP, and SOX10. The Ki-67 score was <2%. The findings were compatible with a low-grade LMS of the rectum. Based on the limited evidence available in the literature, a multidisciplinary team decided for an additional full-thickness resection with transanal endoscopic microsurgery (TEM). The new specimen from the TEM was tumor free. The patient is currently on 6-month follow-up, with no signs of local recurrence or metastasis.

Discussion/Conclusion: ESD may be an adequate therapy for LMS of the rectum in selected cases. Further cases need to be performed using this technique and long-term follow-up is required for all patients undergoing this technique.

No competing financial interests exist.

Runtime of video: 6 mins 48 secs

Keywords: leiomyosarcoma, endoscopic submucosal dissection, rectal neoplasms, endoscopy

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