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VIDEO FORUM

Robotic transanal total mesorectal excision with intersphincteric dissection for extreme distal rectal cancer: a video demonstration

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Transanal total mesorectal excision is an important new development for curative-intent, radical resection of distal rectal cancer [1]. Using the transanal minimally invasive surgery (TAMIS) approach [2], it is possible to perform this operation robotically [3].

This video illustrates robotic transanal total mesorectal excision for curative-intent resection. The operation was performed on a 66-year-old female (body mass index 31.6 kg/m^2), who was diagnosed with synchronous invasive moderately differentiated adenocarcinoma at 25 cm from the anal verge and in the far distal rectum—<4 mm from the dentate line. MRI staging revealed no evidence of lymph node metastasis, and the rectal tumor was staged as cT2. After discussion at multi-disciplinary tumor board, the consensus decision was to proceed with radical surgical resection.

The rectal dissection, including intersphincteric dissection was performed using the da Vinci *Si* Surgical System (Intuitive Surgical, Sunnyvale, CA, USA) and a two-team approach—with laparoscopy from above—was used to complete the resection. Operative time was 316 min; estimated blood loss was 75 ml. There were no operative complications. Final pathology revealed a sigmoid pT2 adenocarcinoma measuring 2 × 2.5 cm and an extreme distal rectal pT2 adenocarcinoma measuring 3 × 3 cm. There were 6 out of 33 lymph nodes positive for metastatic disease. The mesorectal envelope was graded as 'completely intact' (Quirke 3). All resection margins were negative, and the final distal margin on the fresh specimen measured 4 mm.

This video demonstrates the technique used and shows that even for extreme distal rectal cancer, the robotic transanal approach is feasible and that a high-quality resection can be performed allowing for sphincter preservation and R0 resection.

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