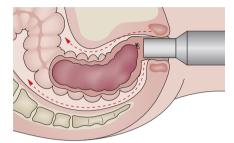
Notable potential of NOTES for rectal cancer treatment

Endoscopic transanal proctectomy (ETAP) has shown promise as a minimally invasive procedure to treat rectal cancer, according to the findings of a recent prospective, multicentre study published in *Annals of Surgery*.

"A few years ago, surgeons began investigating dissection of the lower part of the rectum from a transanal approach (when a total proctectomy has to be performed) because dissection of the distal rectum is difficult from above," explains author Jean-Jacques Tuech. This natural orifice transluminal endoscopic surgery (NOTES) approach has many advantages over laparoscopic surgery in this setting; for example, excessive traction during laparoscopic surgery can lead to fracture of the mesorectum and injury to hypogastric nerves.

Despite these advantages, the uptake of NOTES has been fairly slow to date. Previous studies have investigated the ETAP approach in porcine models and in human cadavers. In addition, a few



ETAP for mesorectal excision. Arrows show dissection planes. Image produced in consultation with J.-J. Tuech.

case reports have been published. Tuech and colleagues performed their study to establish how surgical or functional complications and short-term oncologic results compare between ETAP and the conventional laparoscopic approach for total mesorectal excision.

56 consecutive patients (41 men) with low rectal cancer requiring proctectomy and coloanal anastomosis underwent ETAP. No postoperative mortality occurred and the morbidity rate was 26%. Furthermore, no intraoperative complications were noted. The mesorectum was complete in 84% of patients and nearly complete in the remaining 16%. Tuech and the team conclude that "ETAP is a feasible alternative surgical option to conventional laparoscopy for rectal resection".

"This approach has the greatest advantage in difficult cases, such as a bulky tumour of the middle rectum, and in patients with obesity, or a narrow pelvis, or in whom laparoscopic or laparotomy is to be avoided," says Tuech. The authors also note, however, that ETAP is technically demanding and requires expertise in both laparoscopic and rectal cancer surgery; they emphasize that long-term outcome data are needed before this procedure becomes standard. A planned randomized study could also contribute to this goal.

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Original article Tuech, J.-J. et al. A step towards NOTES total mesorectal excision for rectal cancer. *Ann. Surg.* doi:10.1097/SLA.00000000000994