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Editorial

Transanal Total Mesorectal Excision[☆]

Escisión total del mesorrecto por vía transanal

Indications for transanal endoscopic microsurgery (TEM) have evolved since surgery for incipient rectal tumours. The possibility of access via TEM has now been extended to other rectal and pelvic diseases, while standard surgical treatment is performed through the abdomen by laparotomy or laparoscopy.^{1,2}

The evolution of laparoscopy has resulted in natural orifice transluminal endoscopic surgery (NOTES), which defends the integrity of the abdominal wall and reduces the trauma associated with conventional surgery. In colorectal surgery, the combination of TEM with NOTES has a number of advantages: the anus is a natural orifice which provides a short distance to the surgical area; there is experience in this method; and the proven advantages of TEM lead to its use in this field. Viscerotomy that requires NOTES is performed in the rectum from where the resected colorectal specimen is extracted and anastomosis performed, to avoid any additional visceral wound.³⁻⁷ The transanal approach provides a direct view of the distal rectal margin resection. In total mesorectal excision (TME) this vision control could lead to a more precise radial margin and better control of the prostatic and vaginal plane although studies are needed to demonstrate this.⁸ These techniques offer the possibility of monitoring the anastomosis and repairing any defects, as well as offering solutions in complex laparoscopic surgery of the rectum (men with a narrow pelvis, obese men, large tumours).^{9,10} In these situations distal resection sometimes imposes the use of multiple endostapling with a high risk of anastomotic dehiscence.

Several groups have published articles on pure NOTES,^{3,11,12} where TME is completely performed via the transanal approach. Cases have been presented in which this technique was performed with similar oncological results to standard surgery. The limitations of this technique are also described (indications preferably in redundant sigma, small rectal tumour and mesorectum which is not overly thick) but it is hoped that technical improvements will further its development.

While awaiting these innovations, the so-called “hybrid” techniques are being used,^{13,14} which combine laparoscopy with TEM. These techniques enable critical steps such as dissection and control of the mesenteric vessels, dissection of the splenic angle of the colon, ureteral control, and performing anastomosis, taking advantage of the experience which has already been gained. Time in surgery is thus optimised with simultaneous laparoscopic and transanal approaches.⁸ Several publications exist to date which present a series of cases using hybrid techniques, with the intention of presenting NOTES as an alternative to laparoscopic rectal surgery in complex situations. The Rouanet⁹ group presents the cases of 30 patients on which hybrid NOTES were performed. The group defends its use in patients with anatomical difficulties (narrow pelvis, thick mesorectum, high BMI, large prostate) or certain tumour characteristics (presence of fibrosis, previously large tumour, radial margin under or equal to 1 mm by NMR). The Lacy¹⁰ group presents a prospective study of 20 cases where NOTES-minilaparoscopy-assisted natural orifice surgery (MANOS) was performed with good oncological results, although long-term results remain to be demonstrated. Like the previous study, it indicates the use of this technique in narrow pelvises. It coincides with the idea that a transanal view promotes better control of the distal and radial margin.

Use of this technique has recently experienced a boom, as the solution to the practice of less invasive surgery than TME in situations where laparoscopy is difficult to perform. However, it is possible to create the false impression that transanal TME may be performed by any team with laparoscopic experience. TEM has a different learning curve to laparoscopy. We have been able to appreciate this from our experience in TEM/TEO courses.¹⁵

The pioneer groups in transanal TME^{3,5,8} previously carried out studies on animal or cadaveric models, or they had extensive experience in TEM. We therefore suggest that the groups interested in applying this technique are trained in both laparoscopic TME and in TEM.

[☆] Please cite this article as: Serra-Aracil X. Escisión total del mesorrecto por vía transanal. Cir Esp. 2014;92:221-222.

At present, the transanal TME technique is not standardized. Resection may be performed inside the peritoneal cavity or outside the perineum. The anastomosis, depending on the distance of the tumour, may be coloanal or colorectal, manual or mechanical, with or without a protective stoma. The ideal tool is yet to be discovered (single port-TAMIS, TEM, TEO) to achieve a simpler, safer, more economical and faster procedure. From our experience with TEO/TEM, the slightest angling of the TEO rectoscope offers a better view of the anterior side of the rectum for this type of surgery; the rectoscope operates over 360° of the circumference. However, they are very similar in terms of transanal endoscopic technique.¹⁶

Greater experience in this promising technique is required to obtain the best results in terms of oncology, surgical morbimortality and sphincter function through controlled prospective and randomised studies which respond to these issues.

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2173-5077/\$ – see front matter

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