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R. Cantero & G. Salgado

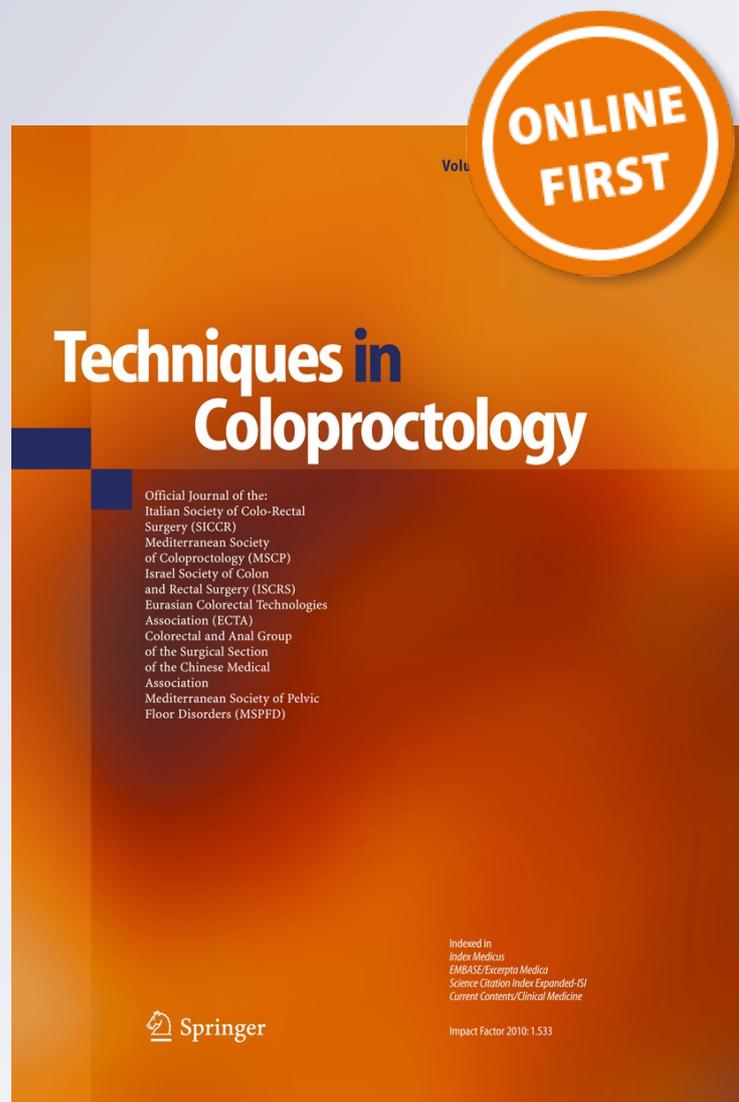
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Transanal access for rectal tumors: the simultaneous use of a flexible endoscope and SILS

R. Cantero · G. Salgado

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Abstract The authors report that TEM with a single-incision laparoscopic surgery (SILS) port can be facilitated by the use of a colonoscope instead of a conventional laparoscopic camera. The colonoscope can be inserted through one of the SILS channels and has the added benefit of flexibility, insufflation, irrigation, suction, and an operative port.

Keywords Rectal tumors · SILS · TEM · TAMIS

Introduction

Transanal excision has become the surgical procedure of choice not only for treating rectal polyps, and early rectal cancer (T1, N0, M0), but also for completing previous partial snare resections, for re-resections in recurring adenomas and for performing transmural scar total biopsy after neoadjuvant chemoradiation in a selected group of rectal cancer patients managed with a “watch and wait” approach.

It is generally agreed that traditional transanal access with anal retractors does not always provide good visualization, can be difficult to control the proximal area of the lesion, impossible to reach lesions located in the mid or upper rectum, and useless in obese patients. All these

factors could increase the risk of incomplete resection being performed.

Surgical technique and results

At our institution, we use a minimally invasive approach with transanal endoscopic microsurgery (TEM) and more recently TEM with SILS (SILSTM Port, Covidien) [1] to treat tumors of the mid-to-upper rectum, which offers an excellent view in a distended rectum, reducing the risk of positive surgical margins, facilitating access to more proximally located lesions, and probably reducing the incidence of fecal incontinence. In our modification of the technique, we use a flexible endoscope through one of the channels of the SILS port, instead of a conventional laparoscopic camera. From November 2009 to January 2012, 20 patients with early rectal cancer underwent transanal SILSTM Port surgery with the use of a colonoscope [2]. All tumors were located in the lower third of the rectum. All patients were given general anesthesia and were placed in the lithotomy position. All surgeries were completed in less than 1 h and without any postoperative complications.

Discussion

Using a flexible endoscope simultaneously through one of the SILS channels provided the following technical advantages:

- Less clashing of surgical instruments.
- Retroversion offers a better visual control of the upper limit of the lesion.
- Insufflation of air to keep the pneumorectum more constant.

R. Cantero (✉)
Department of Colorectal Surgery, Infanta Sofia University
Hospital, San Sebastian de los Reyes, Madrid, Spain
e-mail: ramon.cantero@salud.madrid.org

G. Salgado
Department of Colorectal Surgery, Santa Elena Hospital,
Marbella, Spain

Fig. 1 Extra instrumental assistance through the endoscopic working channel



Fig. 2 Comfortable position of the two surgeons between patient's legs when the patient is in the lithotomy position



- Lavage and suction without the need to change instruments.
- Possibility of using “extra” endoscopic instruments (Fig. 1)
- More comfortable position between patient's legs in lithotomy position (Fig. 2).

Conclusions

In our experience, TEM with a SILS is facilitated by the use of a flexible colonoscope which functions as a camera,

as an irrigation, suction and insufflations device, and as an operative channel.

Conflict of interest The authors declare that they have no conflict of interests.

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