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Technical Note

Transanal Endoscopic Proctectomy: a new approach to the total excision of the mesorectum☆

Carlos Ramon Silveira Mendes[a,b,c,*], *Luciano Santana de Miranda Ferreira*[a,c], *Ricardo Aguiar Sapucaia*[a,c], *Meyline Andrade Lima*[a,c], *Eduardo Costa Cobas*[a,c], *Sergio Eduardo Alonso Araujo*[c,d,e]

[a] *Service of Coloproctology, Hospital Santa Izabel, Santa Casa de Misericórdia da Bahia, Salvador, BA, Brazil*
[b] *Residence Program in Coloproctology, Hospital Geral Roberto Santos, Salvador, BA, Brazil*
[c] *Sociedade Brasileira de Coloproctologia, Brazil*
[d] *Department of Gastroenterology, Medicine School, Universidade de São Paulo (USP), São Paulo, SP, Brazil*
[e] *Service of Colon and Rectum Surgery, Hospital das Clínicas, Medicine School, Universidade de São Paulo (USP), São Paulo, SP, Brazil*

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ABSTRACT

Introduction: Colorectal cancer is a serious public health problem. In 1982, Heald managed to reduce mortality by standardizing the total excision of mesorectum. The use of transanal endoscopic microsurgery has emerged to allow resection of rectal tumors as a minimally invasive method. With the association of Transanal Endoscopic Operation with total excision of mesorectum, it was possible to develop a new approach for total excision of mesorectum. *Surgical technique:* The procedure is started by the perineal time with Transanal Endoscopic Operation device; introduction of Transanal Endoscopic Operation system follows, with exposure of the lesion with a circumferential incision at a distance between 2 and 4 cm from distal tumor margin after making a purse string suture to close the rectal stump. Then, dissection is carried out by the posterior portion until reaching the presacral avascular fascia, completing the mesorectal circumferential dissection until the peritoneal reflection. After this step, a laparoscopic procedure is performed with the use of three trocars, with mobilization of splenic flexure and ligation of the inferior mesenteric artery, as well as confection of a protective ileostomy. Then, transanal removal of the surgical specimen is performed, and the procedure goes on with a coloanal anastomosis.

☆ This work was conducted at Hospital Santa Izabel, Santa Casa de Misericórdia da Bahia, Salvador, BA, Brazil.

* *Corresponding author at*: Residence Program in Coloproctology, Hospital Geral Roberto Santos, Salvador, BA, Brazil.
E-mail: proctoramon@hotmail.com (C.R.S. Mendes).

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Protectomia Endoscopica Transanal (TaETM): Uma nova abordagem para excisão total do mesoreto

Palavras-chave:
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R E S U M O

Introdução: O câncer colorretal é um serio problema de saúde publica. Em 1982, Heald conseguiu reduzir a mortalidade com a padronização da excisão total do mesoreto. O uso da Microcirurgia endoscópica transanal surgiu para proporcionar ressecções de tumores de reto como método minimamente invasivo. Com a associação do TEO a ETM foi possível desenvolver uma nova abordagem para ETM.

Técnica cirúrgica: O procedimento é iniciado pelo tempo perineal com o aparelho de TEO. Em seguida o sistema TEO é introduzido, com exposição da lesão por meio de uma incisão circunferencial a cerca de 2 a 4 cm da margem distal do tumor após a confecção de sutura em bolsa com fechamento do coto retal. Em seguida, faz-se dissecção pela porção posterior até a fáscia avascular pré-sacral, completando a dissecção circunferencial do mesorreto até atingir a reflexão peritoneal. Após essa etapa, faz-se laparoscópica com utilização de três trocateres, com mobilização do ângulo esplênico e ligadura da artéria mesentérica inferior, e também a confecção de uma ileostomia protetora. O espécime cirúrgico é retirado pela via transanal, e o procedimento tem continuidade com uma anastomose coloanal.

Introduction

Colorectal cancer (CRC) is a serious health problem worldwide. It is known that 25% of CRC cases are located in the rectum.[1,2]

In 1982, Heald et al. proposed a standardization of total excision of mesorectum (TEM), whose initial results were surprising in terms of local recurrence.[3] Through standardization of the technique, these authors managed to reduce local recurrence to less than 10% and increase the overall survival for 80%. The transabdominal-transanal (TATA) technique described by Marks[4,5] improved the quality of life for patients who would be submitted to abdominoperineal amputation, enabling its realization by laparoscopy.

The transanal endoscopic microsurgery (TEM) was introduced in 1983 by G. Buess as a minimally invasive technique for the resection of adenomas and early rectal carcinomas.[6–9]

Using TATA technique, performing abdominal time by laparoscopy and perineal time with Transanal Endoscopic Operation (TEO; Storz, Tuttlingen, Germany) system, Transanal Endoscopic Proctectomy (TAEP) was established.

The quality of TEM with lymph node resection in pursuit of a single objective which is the RO resection, has promoting the search for new tactics and techniques. Obese patients with narrow pelvis with a fatty mesorectum which has a fibrosis plane mainly with a big prostate have hindered the resection by laparoscopy.

TAEP emerged as an alternative for difficult cases of rectal adenocarcinoma.

This is a technique that is performed by transanal route; in it, one circumferential rectal incision with dissection of the whole rectum together with the mesorectum to the abdominal cavity is carried out. The abdominal period is developed by laparoscopy to release the splenic flexure and by inferior mesenteric artery and vein ligature.

Surgical technique

In February 2014, one of the first cases in Brazil of TAEP for treatment of rectal tumor was conducted at Hospital Santa Izabel, Salvador – Bahia. Preoperatively, the patient filled and signed a free and informed consent form and was instructed regarding the procedure.

To perform the proctectomy, some preoperative measures were implemented, for example, mechanical bowel preparation and prophylactic antibiotic therapy during anesthetic induction.

Following general anesthesia, the patient is placed in lithotomy position.

The procedure is initiated by the perineal time, where the TEO system will be used. Next, digital expansion for introduction of TEO system, exposure of pectineal line with a circumferential incision 2–4 cm from the distal tumor margin, and a purse string suture with closure of the rectal stump with vicryl 3.0 is carried out (Fig. 1). Then, a circumferential demarcation of the rectum with the use of electrocautery is performed. Using a Harmonic scissors (Ethicon Endo-Surgery) the surgeon keep doing the dissection through the posterior portion to the avascular presacral fascia, completing the circumferential dissection through the mesorectum to reach the peritoneal reflection. After this step is completed, a laparoscopic procedure with an inventory of the cavity is carried out, with the use of three trocars (a 10-mm trocar in the umbilical region, another 11-mm trocar in the region where the ileostomy will be built, and a 5-mm trocar in the right flank). Then, the surgeon proceeds with mobilization of the splenic flexure and ligation of the inferior mesenteric artery, in