



# Journal of Coloproctology

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## Editorial

### Extralevator abdominoperineal excision: a technique moving towards definitions and standardization

### Amputação abdominoperineal de reto extra-elevador: definições da técnica e padronização



Over the past decades, management of rectal cancer patients witnessed great improvements regarding radiological staging, new forms of adjuvant therapy, advances in surgical technique and pathological reporting. Above it all, one of the most real advances is that rectal cancer is no longer a fatal disease as it was at the beginning of the 20th century.

Among the surgical developments, adoption of total mesorectal excision (TME) principles has yielded great dividends regarding decreased local recurrence rates and chances of cure. However, as worst outcomes were registered in low rectal tumours treated with abdominoperineal resection (APR) in comparison to anterior resection (AR), factors such as tumour biology, patterns of spread and technical issues were incriminated. In this setting, inadequacy of classical APR in achieving a free radial or circumferential margin was considered the main technical limitation.<sup>1</sup>

Subsequently, the technical proposition was introduced by Holms<sup>2</sup> to improve oncological results. Distinction with the classical APR (in which the levators are not removed with the specimen) was emphasized with the terms cylindrical, extended or extralevator APR (ELAPE). Removal of a cylindrical specimen aims to remove a greater amount of tissue from around the tumour, thus achieving a free circumferential resection margin (CRM).

Since then, indications of ELAPE have been discussed. Holm believed this was not an operation for every patient, and should be used for low (<1 cm from the dentate line) rectal cancer cases requiring a wider dissection due to threatening circumferential margin.<sup>3</sup> Not less important, distinction of three or two<sup>4</sup> forms of ELAPE in relation to the perineal dissection has also been a matter of debate, despite the general recognition that ELAPE is frequently accompanied by

increased perineal morbidity either in lithotomy or prone positions.<sup>5</sup> As rates of perineal wound complications are high (35–66%) and related with radiotherapy,<sup>6</sup> surgeons have tried to overcome this problem by using muscle graft (myocutaneous flaps), biological mesh fixation or even closure to prevent local hernias.

This vision of a selective indication aiming to reduce short-term complications seems to be the preferred choice today, mainly for those patients at risk of intraoperative perforation, which raises local recurrence risks.<sup>7</sup> Moreover, the decision-making process in an APR candidate is highly dependent on anatomical information derived from magnetic resonance imaging (MRI) either before or after nCRT. It has been proposed that RNM information is essential when considering alternative approaches.<sup>8,9</sup>

Although ELAPE is considered effective in reducing local recurrence, intraoperative tumour perforations and CRM positivity,<sup>10</sup> the reported oncological<sup>6,11,12</sup> and morbidity outcomes<sup>13,14</sup> compared to conventional APR are not uniform. This absence of difference might be due to a more radical performance of the so-called conventional APR or to pathological features of treated cases. For example, the presence of T2 or T4 anterior tumours treated with ELAPE in a certain series would not express an eventual superiority of this operative choice.

In the last JCOL number, the National Cancer Institute presents a retrospective series of ELAPE performed from 2003 to 2015, confronting fifty patients undergoing standard APes against 22 ELAPE.<sup>15</sup> All patients received nCRT and were operated in the prone position. According to the authors, ELAPE was indicated selectively in cases of sphincter complex or levator invasion, and a routine indication could not be established due to the increased perineal complications.

Although an interesting work, the authors recognize some limitations such as the long study period (12 years) and different rates of surgical access among the groups. Certainly, those differences may lead to bias regarding comparative outcomes, mainly because the number of cases in each group was too different (67 vs. 22).

Despite this, one recognizes the better operative field provided by the better visualization during prone position. This choice is also associated with shorter operative times and less blood loss.<sup>6</sup>

Outcomes must be addressed in terms of oncological results and postoperative complications. In this manuscript, results were compared with an historical cohort of patients. However, there were some features that may have influenced results. Some of them are interval between neoadjuvant chemotherapy (nCRT) and surgery (24 vs. 14 weeks), dentate line involvement 81% vs. 42%), doubled number of T4 tumours (18% vs. 9%), minimally invasive surgery (90% vs. 16%) and use of perineal mesh, all of them greater in ELAPE group. Surprisingly, this group presented a greater number of T0 tumours (9% vs. 4.5%) and intra-operative perforations (18% vs. 9%), although advanced pT-stage may be considered a risk factor for specimen fragmentation, ELAPE is less likely to produce a fragmented specimen.<sup>14</sup>

Consequently, the authors were not able to demonstrate better results associated with ELAPE. And even the smaller readmission rate may be attributed to the greater number of open procedures among the historical patients. In a further analysis regarding the perineal procedures, one may note that the number of vaginal and prostate resections is not addressed; simultaneously, mesh reinforcement was inserted based on individual decisions, and 90% of ELAPE patients did so. As better results were achieved in cases without mesh insertion, it is difficult to assess how bad is the case or the mesh.

The authors also describe a smaller median length of stay after ELAPE (7 vs. 5 days). However, this finding may be interpreted as a natural consequence of a better recovery in patients undergoing a minimally invasive access, which was the preferred choice in this group.

Having all these data in mind, comparison of oncological outcomes between turns to be a difficult task. Even more thinking that ELAPE superiority over classical APR has not always been demonstrated.<sup>7,16–18</sup>

Being a young and new technical alternative, ELAPE still has to face controversies regarding nomenclature, indications, pelvic reconstruction and other important issues. The present paper brings very interesting ideas and perspectives to be discussed. More than this, it represents a local experience trying to evaluate the role and outcomes of ELAPE in the management of low rectal cancer.

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