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Colectomía derecha laparoscópica más escisión completa del mesocolon y ligadura vascular central

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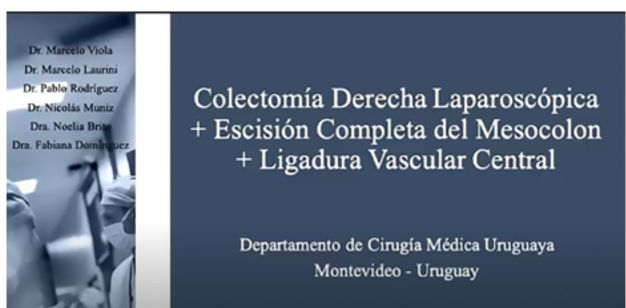

ABSTRACT
Introduction: *Oncological right colectomy is the surgical treatment of choice for right colon cancer. However, several years after Hohenberger's publication on the standardization of right colectomy, the necessary extension of lymphadenectomy when performing surgery with curative intent has been discussed. Currently, the concept of D3 lymphadenectomy involves complete excision of the mesocolon and central vascular ligation of the pedicles of the right colon. The first ensures the inclusion of the entire right mesocolon and the right transverse mesocolon between its peritoneal layers when dissecting the embryological planes, specifically the right fascia of Toldt and the preduodenopancreatic fascia of Fredet.*
On the other hand, the central vascular ligation allows at least the excision of all lymph nodes up to the origin of the right colic vessels (D2) and, eventually, of those that are in front of the superior mesenteric vessels (D3).
Description: *We present a 69-year-old female patient with hypothyroidism and polycythemia vera treated with 100 mg daily of acetylsalicylic acid. She presented with diarrhea for months and a positive fecal occult blood test. Colonoscopy showed a 30 mm vegetating and ulcerated lesion occupying 1/3 of the circumference in the ascending colon. CEA and CA 19-9 were in normal range. Computed tomography showed parietal thickening of the ascending colon and lymphadenopathy in the mesocolon. Absence of systemic dissemination. It was decided to perform oncological right colectomy with complete removal of the mesocolon and central vascular ligation. The patient is placed in a 30º left lateral Trendelenburg position. Pneumoperitoneum with optic trocar up to 12 mmHg. Three operative trocars, one 12-mm trocar in the left iliac fossa midclavicular line, another 5-mm trocar in the midline equidistant from the pubis and umbilicus, and another 5-mm trocar in the right flank anterior axillary line. Examination confirms the location of the lesion and rules out liver and peritoneal disease. A medial approach to the right mesocolon is performed, starting below the ileocolic pedicle through the right Toldt's fascia. Clipping and sectioning of the ileocolic pedicle, vein, and artery are performed separately at their origin. Dissection of the right border of the superior mesenteric vein. Clipping and sectioning of the right superior colic pedicle at its origin (the artery had a common trunk and two branches, clipped and sectioned separately), identifying and sparing the venous trunk of Henle. The section of the greater omentum is completed at the limit of resection in the transverse colon. Section of the gastrocolic ligament from medial to lateral. Section of the right paracolic ligament, mobilization of the last ileal loop and the ascending colon until they are completely liberated. Perfusion of the ileal and colonic section ends with immunofluorescence (indocyanine green) was verified. The transverse colon and distal ileum were sectioned with 60mm violet EndoGIA→. Intracorporeal isoperistaltic latero-lateral ileotransverse anastomosis was made with EndoGIA→ of 60mm purple, and closure of the ostomy in two planes with V-Loc→ 3-0. The histopathology confirmed a moderately differentiated adenocarcinoma T4aN0M0. Under a multimodal ERAS protocol, the patient had an excellent postoperative course, and was discharged 72 hours after surgery.*
After 5 months she is asymptomatic and receiving adjuvant capecitabine, indicated by oncology.
Conclusions: *Oncological right colectomy remains the gold standard for curative treatment of right colon cancer.*
The described technique is postulated as a very satisfactory procedure from the oncological point of view, however there is still a lack of consensus in the publications regarding its safety, despite the fact that in experienced hands it is a safe, reproducible and standardized method.
The decision to perform extended D3 lymphadenectomy must be individualized for each patient, and must be made by a team trained in such surgery.

Keywords: *Colon Cancer; Laparoscopy; Complete Excision of the Mesocolon; Central Vascular Ligation; Lymphadenectomy*

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COMMENT

This video highlights the oncological principles of a more extensive resection, in addition to the use of surgical technology through fluorescence and the optimization of the results with the performance of an intracorporeal suture. Regarding the bibliography, a recent meta-analysis published in the European Journal of Surgical Oncology that included 29 studies with 2592 patients, has shown that total excision of the mesocolon associated with a D3 lymphadenectomy is a reproducible surgical technique, which allows obtaining specimens with better oncological quality without being associated with statistically significant morbidity and improves survival in stages 2 and 3 of right colon cancer.[1]

Anania et al.[2] published a systematic review and meta-analysis of the literature comparing this technique with traditional right colectomy, showing that it is not inferior in terms of safety and achieves greater lymph node harvest, and also it is associated with better overall and disease-free survival at 3 and 5 years.

To conclude, we can cite the article by Mazzarella et al.[3] a systematic review and meta-analysis evaluating this technique. They included 30 out of 919 evaluated studies from 5931 procedures and concluded that it does not increase the risk of postoperative complications and significantly increases the long-term impact. The authors suggest that prospective and randomized multicenter studies should be awaited to consider this procedure as the standard of care.

Like any new procedure, in its initial stage there is a boom, then distrust due to the appearance of adverse events that go hand in hand with the learning curve, to finally be accepted or replaced. Regarding the total excision of the mesocolon with D3 lymphadenectomy, the available evidence postulates it as the future of right colon cancer surgery.

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