



Is total mesorectal excision followed by pull-through delayed colo-anal anastomosis still indicated for low rectal cancer?

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We thank Doctor Belli and Colleagues for their editorial concerning pull-through delayed colo-anal anastomosis procedure to treat rectal carcinoma they recently published in *Annals of Laparoscopic and Endoscopic Surgery* under the title “Reappraisal of pull-through delayed colo-anal anastomosis for surgical treatment of low rectal cancer: do we have to look back to go forward?” (1).

The delayed colo-anal anastomosis procedure appears superior to straight coloanal anastomosis necessitating a temporary ileostomy to protect the anastomosis in many ways. First of all, adhesions between pull-through colonic segment and the internal anal sphincter, that develop waiting the second step theoretically protect against the risk of fistula. Second, the specimen, if not too big, can be extracted by anal route. Third, ileostomy is not mandatory, thus decreasing the risk of specific morbidity. Fourth, the two preceding remarks lead to less pain and absence of scar, and thus, of incisional hernia. Fifth, this is a shorter operation and patient only stay in hospital once on a shorter period. Last, all these factors contribute to lower medical costs.

In 2019, the rectal pull-through procedure with delayed colo-anal anastomosis is proposed for the management of Hirschsprung disease (2), complicated pelvis (3), or as last sphincter-saving procedure for anastomotic fistula (3,4). Advantages of this procedure in the treatment of carcinoma of the distal third of the rectum are not widely proved in the literature. Recently, we reported the results of laparoscopic total mesorectal excision followed by pull-through delayed colo-anal anastomosis in 85 consecutive patients of median age 63 with a low rectal cancer (5). A quarter of the patients

developed septic complications, including nine who presented with an anastomotic leakage. Moreover, 17 patients (29%) experienced a poor functional result. More than one third of the patients recurred before the fifth year of follow-up, which is however, similar to the rates published in the literature. We were a little bit disappointed by the rather high rates of anastomotic leaks, pelvic abscesses, and stenosis. Reasons might be that we applied strict inclusion criteria of very distal rectal carcinoma, we had high percentage of large severe graded tumors, and many patients received neo-adjuvant chemoradiotherapy. However, we also could not exclude technical pitfalls, as mentioned by Belli *et al.* commenting on our paper (1). Nearly a tenth of the patients developed late colonic necrosis. Causes might be systematic complete release of the left colon including the flexure, and/or to the stretching of the mesocolon when performing externalization of the tumor through the anus, and/or compression of the vessels within the anal canal. Reasons for the high septic complications rate might be the following. First, we did a strict prospective study of every kind of infection including septic complications of all types: all suspected cause of infection based on fever, abdominal pain, hyperleukocytosis, C-reactive protein over 130 mg/L, and/or anal discharge lead to immediate assessment with CT scan; no clinical, biologic or radiologic data was lost. The average infection rate of less than 15% in the literature is mainly based on retrospective studies, with therefore many biases and lost data (6,7). The second reason is that we registered pelvic sepsis for a very long time after surgery, instead of the literature that focuses on the first 30 postoperative days. Some infections were

demonstrated long time after institution discharge. Another cause might be the definition we used for pelvic septic complications that comprised not only anastomotic leakage, but also every kind of febrile abdominopelvic fluid effusion, and true peritonitis. This is an important difference between our paper and the literature that considers anastomotic fistula and pelvic collections separately from infection or that apply a strict definition of anastomotic fistula that for example requires interventional radiological or surgical procedure.

In our series, operative specimen extraction was done in all cases transanally, aiming to propose a scarless surgery. We agree with Belli *et al.* that some transanal extractions should have not been done, especially for male patients with bulky tumors and/or thick mesorectal fat and/or obese profile, which render transanal colonic extraction very difficult, include risk of stretching of the left colon and mesocolon, and cause vascular tears and ensuing ischemia of the distal colon, and finally necrotic complications we noticed (5). We also take the advice from Belli and Colleagues, considering that transanal pull-through of large cancers can also lead to anal sphincter muscles distension, and ensuing poor functional results in term of anal incontinence (1). A transversal suprapubic incision could have been used as a good way for tumor extraction in these cases, as we usually do for classical, straight colo-anal anastomosis with ileostomy. Last, we are also grateful toward Belli and Colleagues for their advice to do a close clinical, morphological, and functional examination of the anastomosis during the following months for years and if necessary, in case of stenosis, the use of dilators to decrease the bad functional outcomes related to the stenosis, and the need for further procedures to be performed (1).

Full-laparoscopic techniques, absence of large incisions for specimen extraction, and absence of an ileostomy, associated with good technical, oncological and functional outcomes might be the goal of modern colorectal carcinoma surgery, as asserted by Belli and Colleagues (1). With them, and taking their advices into account, we can conclude that the so-called delayed colo-anal anastomosis seems to be associated with decrease in the incidence of pelvic complications and absence of a protective stoma. Our results were used to start a phase II, multicenter French trial comparing delayed colo-anal anastomosis with no stoma, and straight colo-anal anastomosis with stoma for patients presenting with a carcinoma of the distal rectum and the manuscript is in press. More information will also come from the ongoing international multicenter prospective randomized controlled trial involving Belli and colleagues' institution.

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Footnote

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