

TransPerineal-Total Mesorectal Excision (TP-TME) : a modified novel approach of abdomino-perineal resection for very low rectal cancers

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Aim: After the description of the holy plane the total mesorectal excision has completely revolutioned the rectal surgery but nevertheless, it still represents a challenge for general and colorectal surgeons, especially in case of low and ultralow rectal cancers. This is reason why many technical innovations have been introduced through the years in colorectal surgery, the latest is Trans-Anal TME (TA-TME) combined with an abdominal laparoscopic approach. However, in those patients whose lesion either involve the anal sphincter or is too close to the anus preventing a radical sphincter-saving procedure the abdomino-perineal resection is still the treatment of choice. The present study aims to propose a single center experience about a novel approach using a combined laparoscopic trans-abdominal and laparoscopic trans-perineal technique to perform abdomino-perineal resection with down to up TME technique.

Methods: From March 2016 to March 2018 all the patients with distal rectal cancer suitable for abdomino-perineal resection were treated with this modified double equipe approach, except the first three cases. The first equipe performs the conventional steps of a laparoscopic anterior rectal resection procedure. The second equipe, simultaneously starts with perineal approach (Figure 3). After an anal purstring, the perineal dissection is performed until transection of elevator muscles, then, using a SILS Gelpoint (Medtronic™) (Figure 1) fixed to the perianal skin a videoassisted transperineal down-to-up approach is performed until peritoneal reflexion.



Figure 1
SILS PORT BY MEDTRONIC

Figure 2
MODIFIED RULLIER CLASSIFICATIONS for TaTME

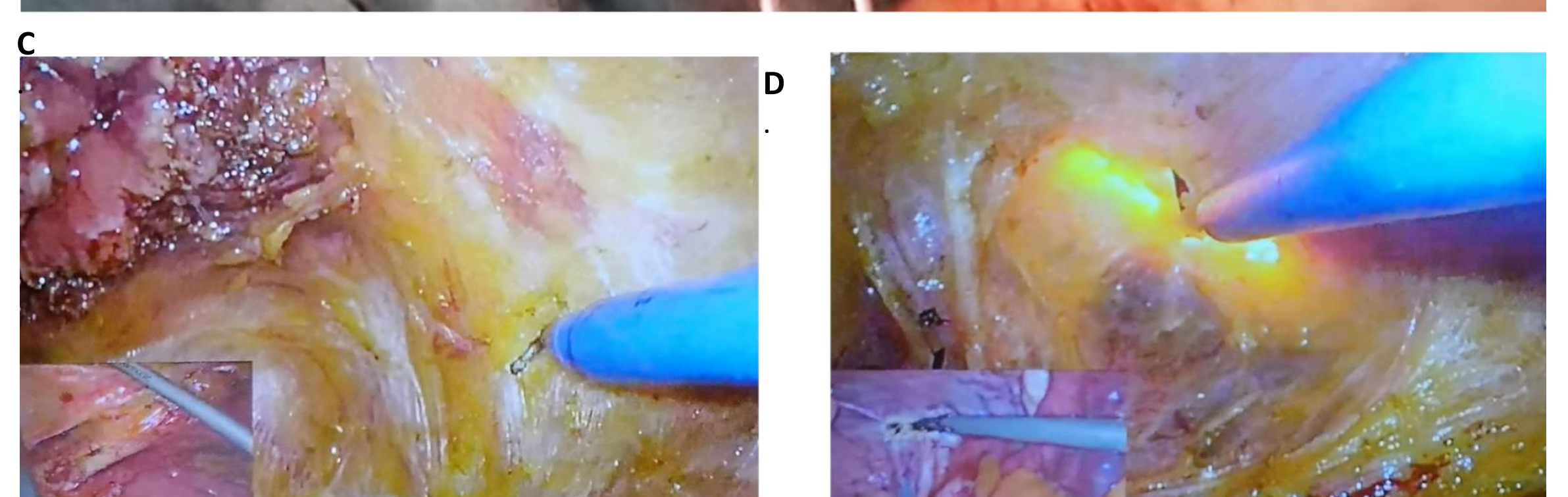
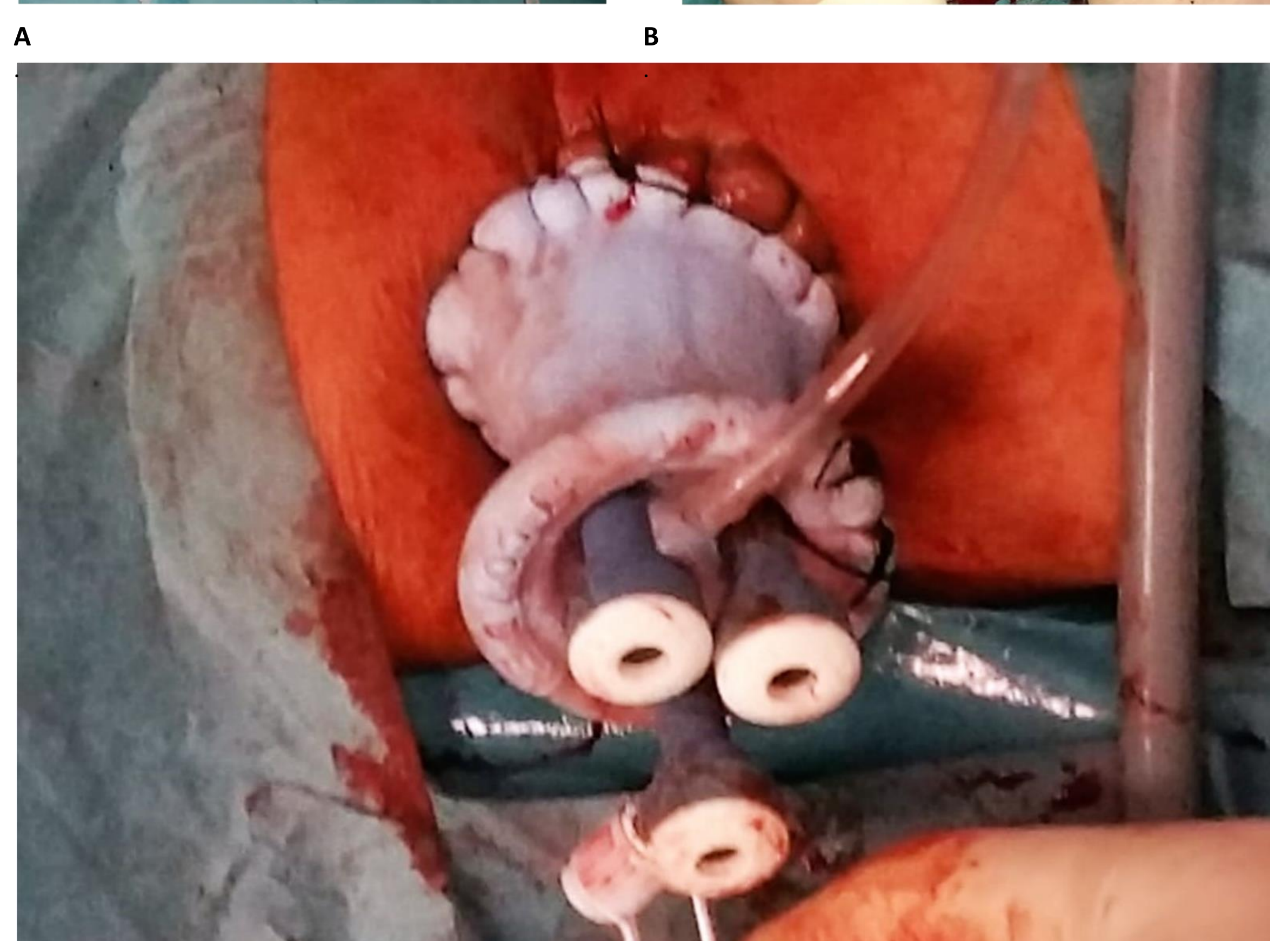
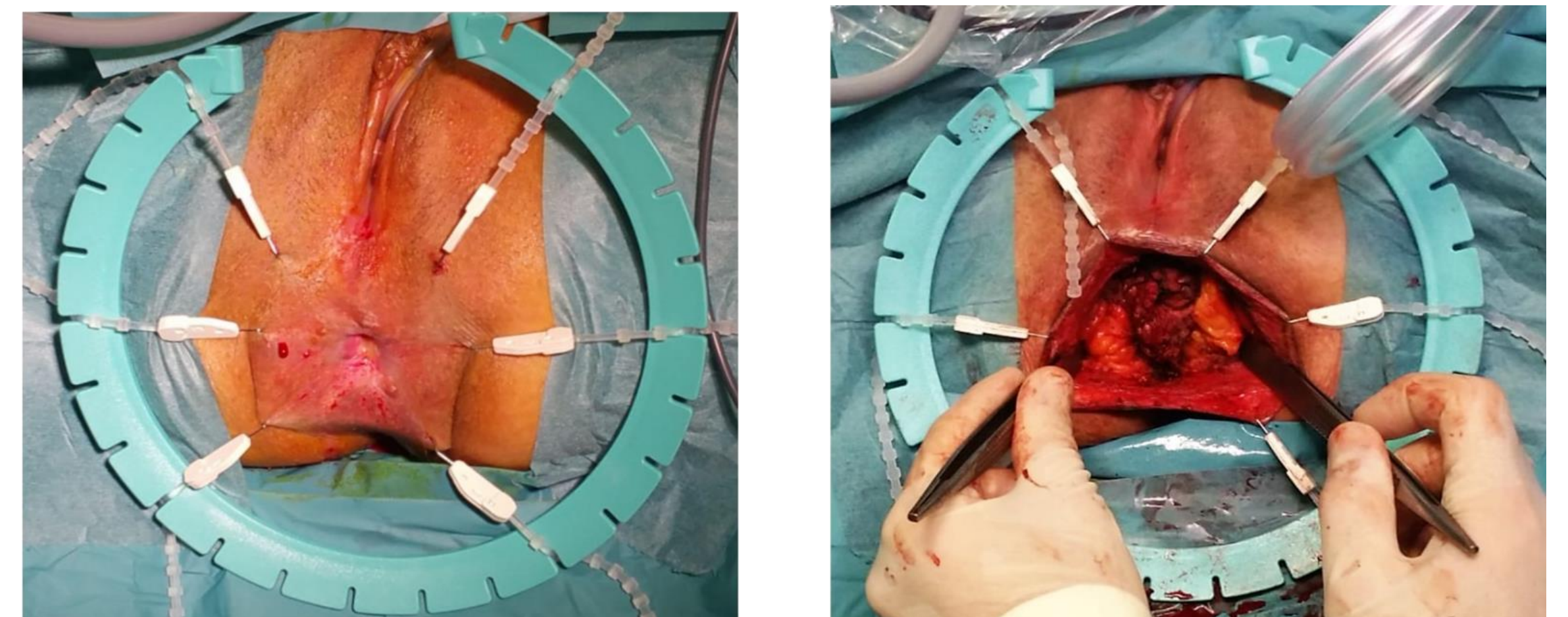
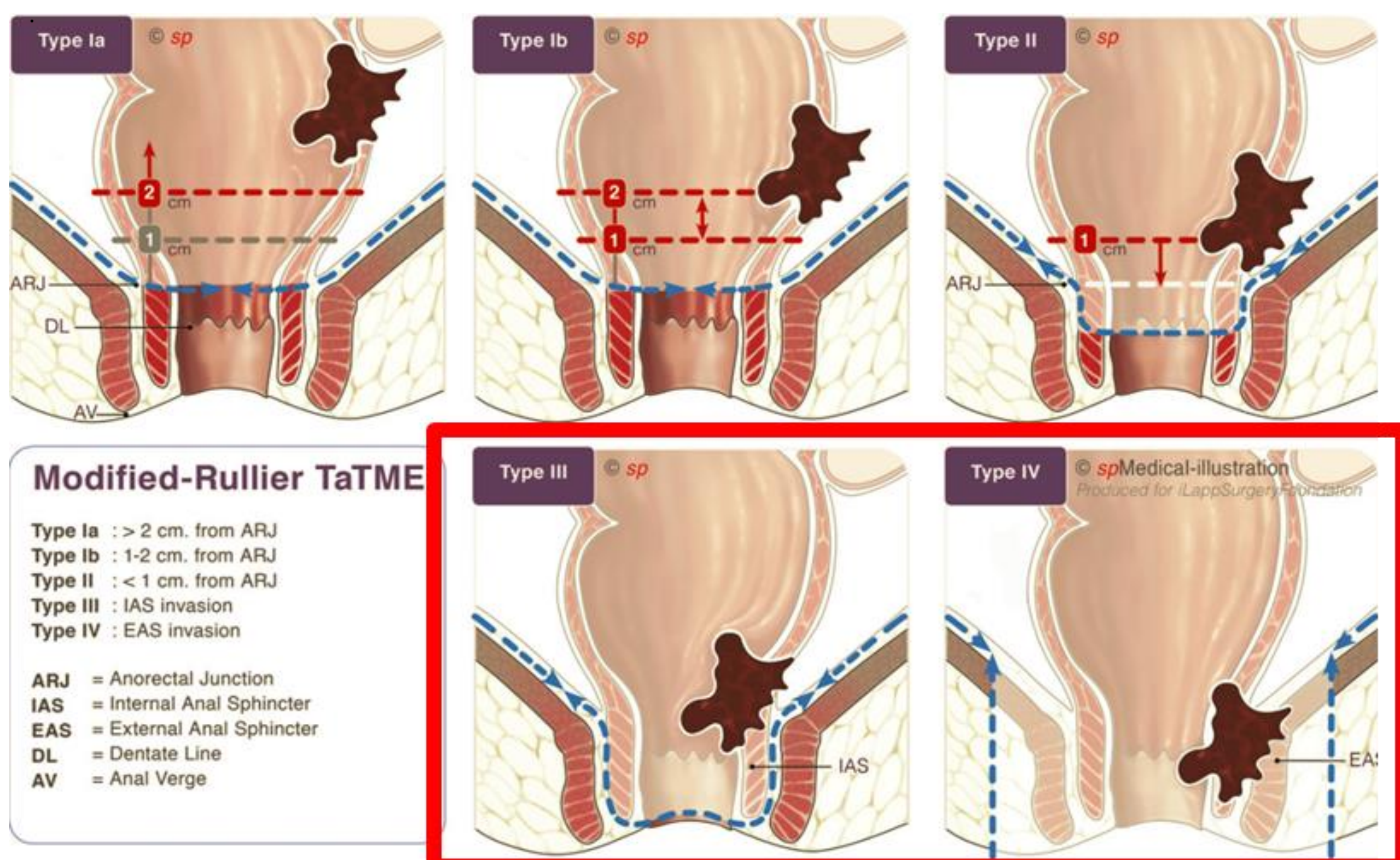


Figure 3
TP-TME TECNQUE: A) Preparation for incision and anal purstring B) Perianal incision and pelvic muscles division to Mesorectal Space C) SILS port fixation to the skin and pneumo-mesorectum D) Videoassisted double equipe TransPerineal Mesorectal Dissection

Pts	Roullier classification	Operative Time	Equipe	pTNM	CRM	Lymphnodes	SURVIVAL 1 year
1	IV	410	single	T4N2M1	pos	15	dead
2	IV	330	single	T1N0M0	neg	18	alive
3	IV	250	single	T3N1M0	neg	15	alive
4	IV	190	double	T3N0M0	neg	21	alive
5	III	180	double	T2N0M0	neg	18	alive
6	III	160	double	T1N0M0	neg	18	alive
7	IV	180	double	T0N0M0	neg	12	alive
8	III	190	double	T2N1M0	neg	15	alive
9	IV	180	double	T0N0M0	neg	12	alive
10	III	190	double	T2N1M0	neg	15	alive

Results: Ten patients underwent abdominoperineal resection with this technique. Data are resumed in Table 1. Mean operative time was 236 minutes with a progressive reduction after the fifth. No intra or perioperative complications were recorded. No mortality at 30d with a disease-free survival at 1 year of 75%. There was only one case with incomplete mesorectal edges.

Conclusions: Laparoscopic TransPerineal-Total Mesorectal Excision with down-to-up approach is a valid alternative to the conventional laparoscopic abdomino-perineal resection. This technique facilitates the mesorectal dissection and seems to improve the outcomes. However, it is a single center initial experience and further studies are needed to confirm these preliminary results.