Anastomotic Leakage Following Laparoscopic TME

By

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INTRODUCTION

- Anastomotic leakage (AL) is considered the most feared and life-threatening complication after rectal cancer surgery.
- It is associated with an increased morbidity, mortality, the length of hospital stay, the rate of re-intervention, and poor oncological outcomes.
- Furthermore, the quality of life is usually affected with poor functional outcomes and a higher rate of a permeant stoma in 56% of patients.

METHODOLOGY

METHODS

- The study was approved from the local ethical committee in both University of Mansoura and University of Rome Tor Vergata.
- Patients underwent curative laparoscopic LAR or ULAR with colorectal or coloanal anastomoses for biopsy proven primary rectal cancer were recruited for the study.
- The patient's recruitment process was started from January 2015 until January 2017.

METHODS (CONTINUED)

Preoperative workup and preparation

- All patients were discussed on colorectal multidisciplinary meeting.

METHODS (CONTINUED)

Figure 1. Trocars position;

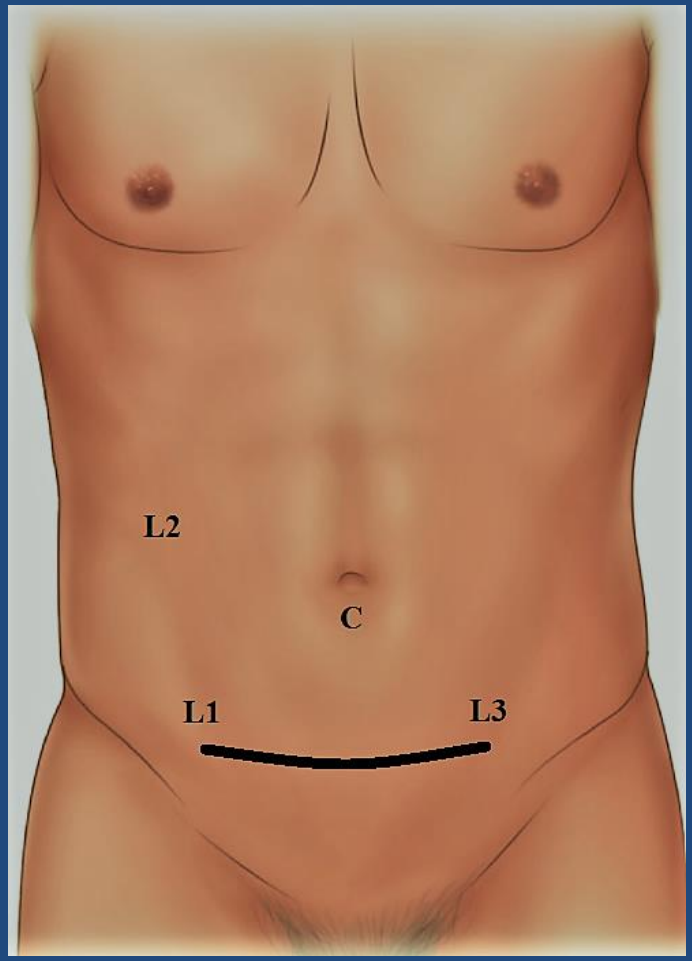
C) A 10-mm for the scope;

L1) 12-mm in the right lower quadrant;

L2) 5-mm port in the right upper quadrant;

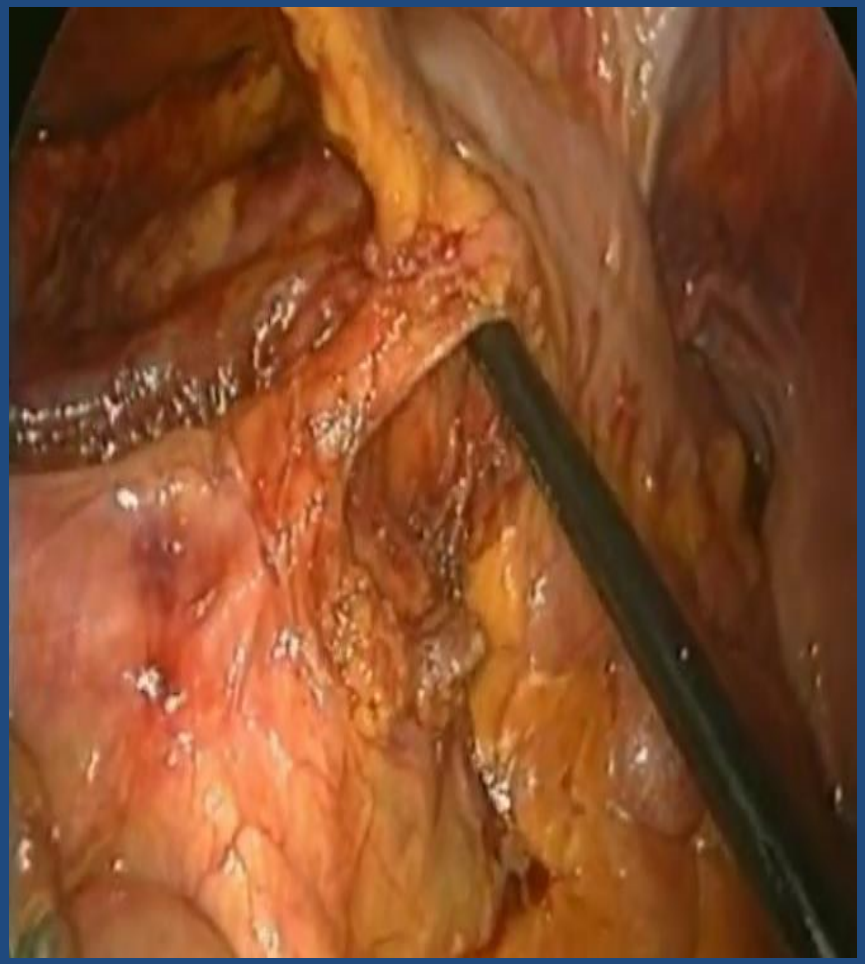
L3) 5-mm port in the. left lower quadrant Additionally, a 5-mm trocar may be placed suprapubic which later could be extended and used for specimen extraction.

The line shows a planned 5-7 cm Pfannenstiel incision which is deployed for the specimen extraction



METHODS (CONTINUED)

Figure 2. Identification of the IMA.



METHODS (CONTINUED)

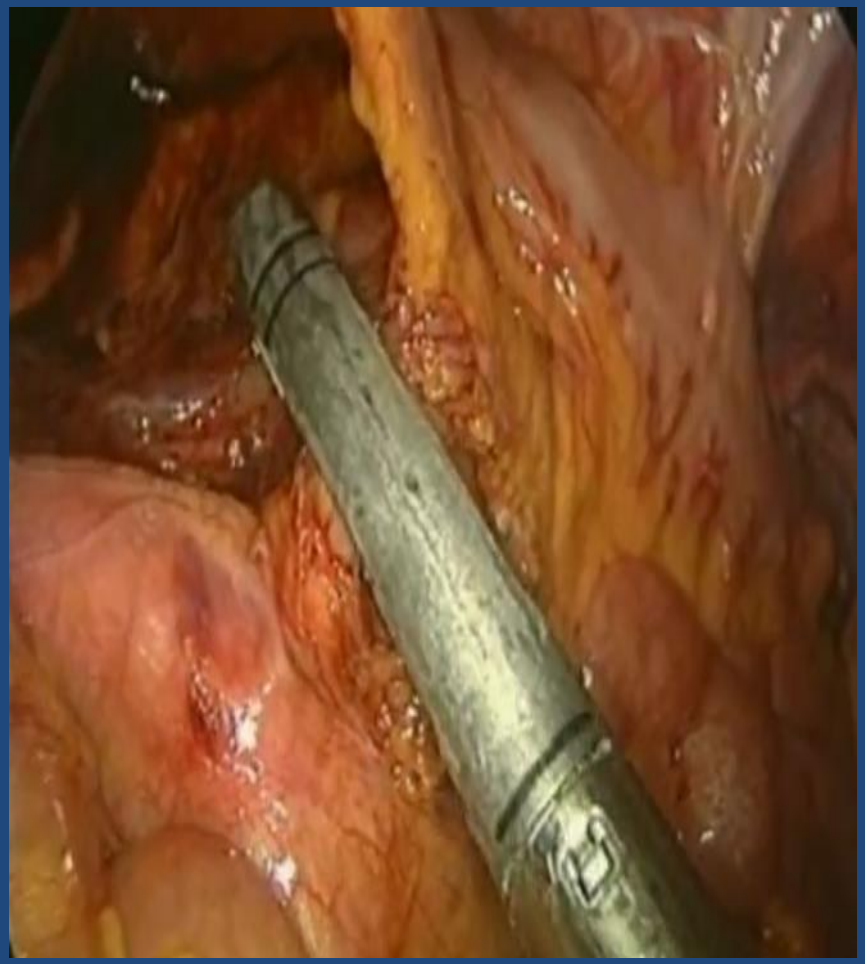
Figure 3. Identification of the left ureter

METHODS (CONTINUED)

Figure 4. IMV ligation at the Treitz ligament "duodenojejunal flexure".

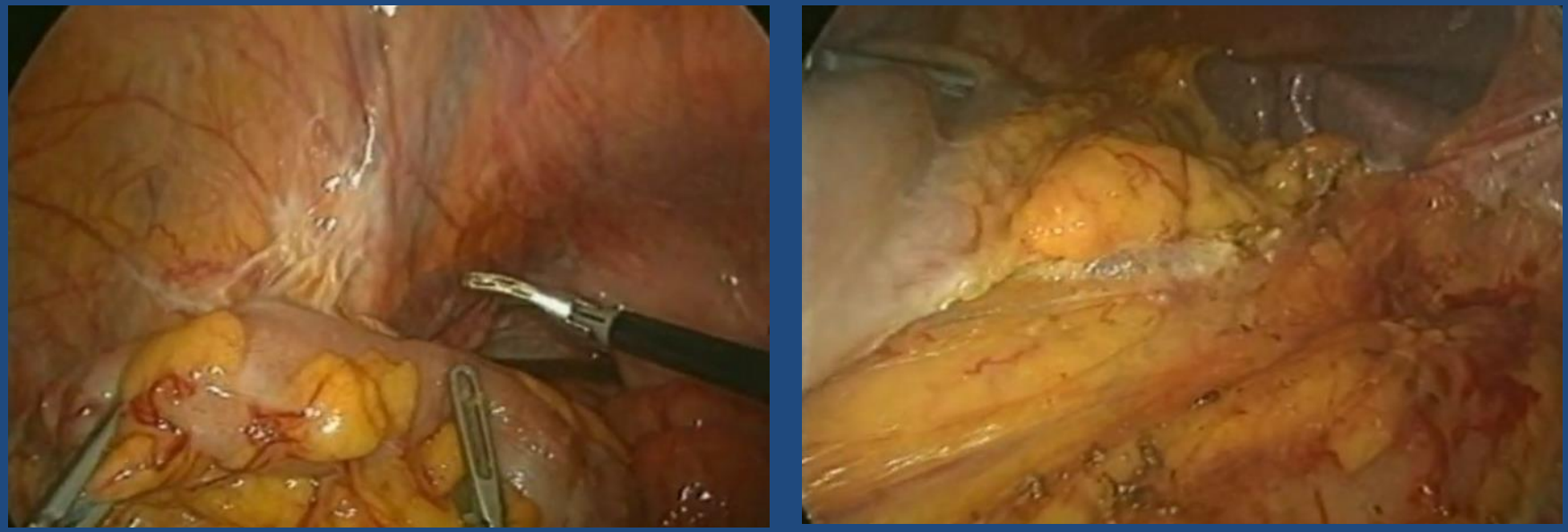
METHODS (CONTINUED)

Figure 5. High ligation of the IMA 1–1.5 cm distally to the origin. The artery is divided by a vascular stapler Endo GIA™ loaded with white cartilage 45 mm.



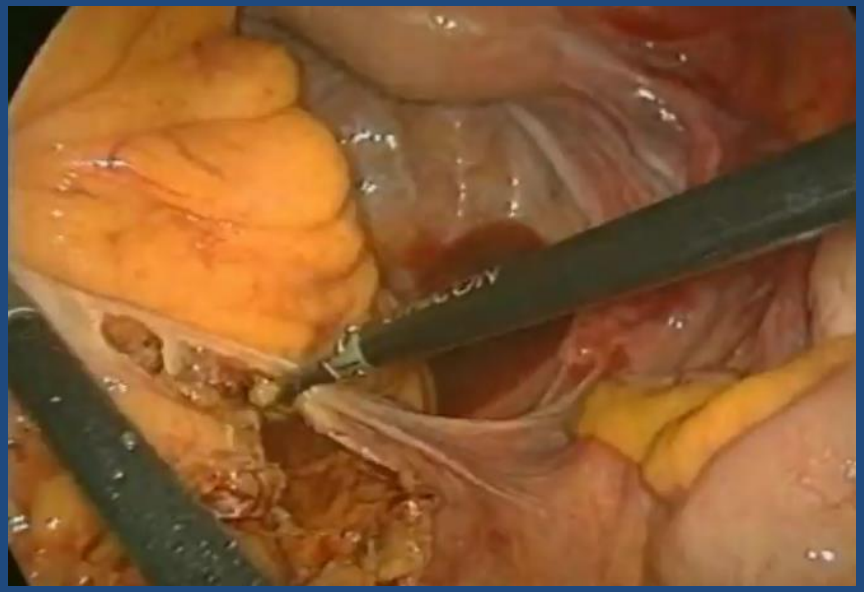
METHODS (CONTINUED)

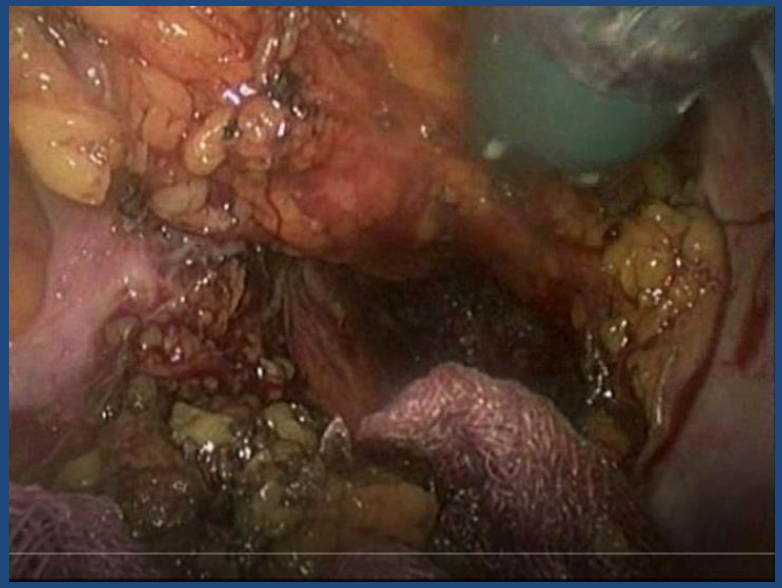
Figure 6. Mobilization of the splenic flexure.



METHODS (CONTINUED)

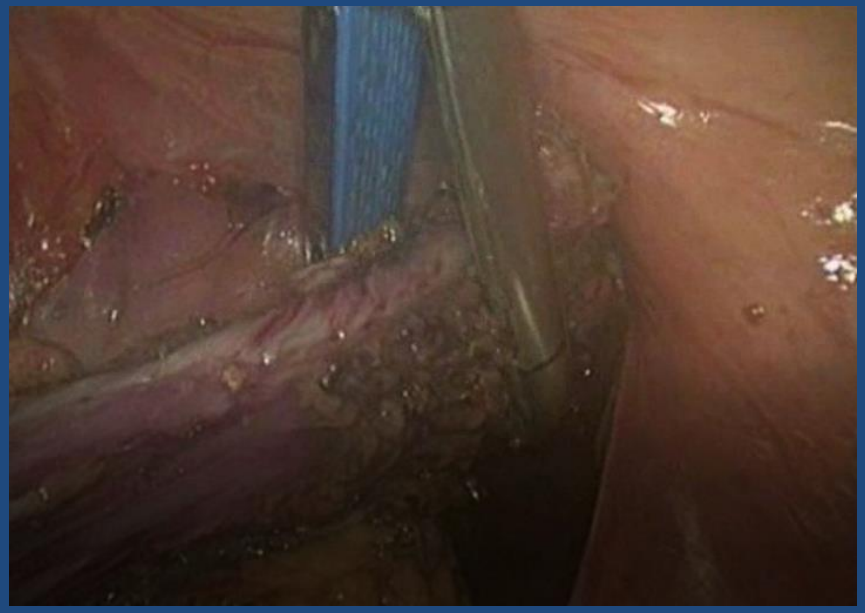
Figure 7. TME as described by Heald.





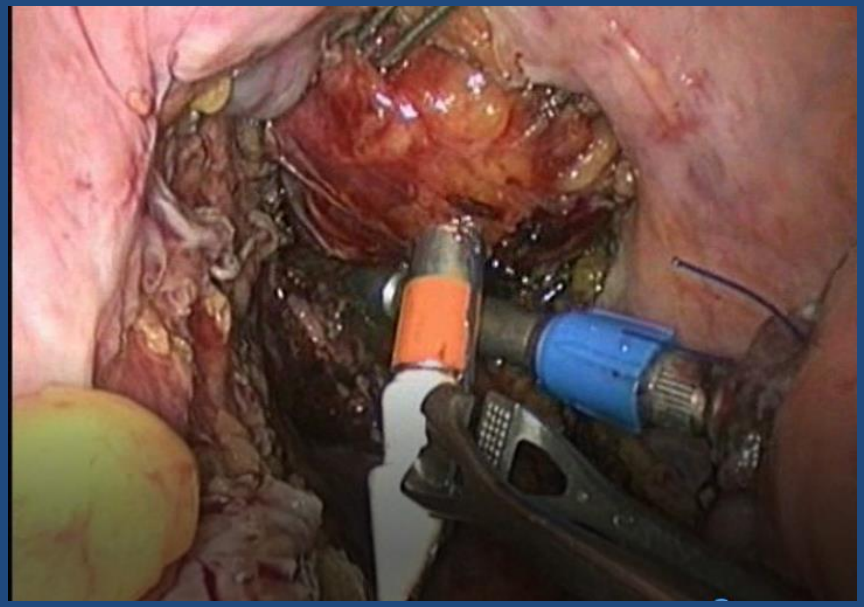
METHODS (CONTINUED)

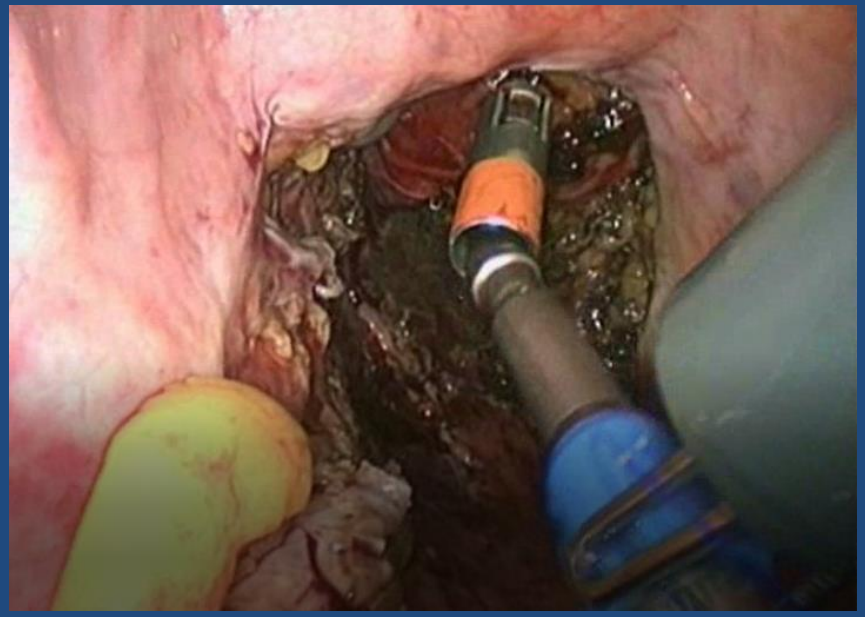
Figure 8. Transection of the rectum with an Endo GIA™ introduced through the 12-mm port.



METHODS (CONTINUED)

Figure 8. Creation of the anastomosis.





METHODS (CONTINUED)

- Competence of doughnuts combined with air leak test (ALT) was employed routinely to check anastomotic integrity.
- At the end of the procedure, a routine pelvic drain was placed in the presacral space.
- A defunctioning ileostomy was constructed if there were any technical difficulties during performing the anastomosis.

METHODS (CONTINUED)

Definition and diagnosis of anastomotic leakage

- We defined AL when; there was a feculent material obtained from the drain or the wound, extravasation of dye on CT with rectal contrast, anastomotic defect directly visualized during colonoscopy, and finally the presence of peri-anastomotic air or fluid visualized on CT scan.

RESULTS

RESULTS

Patients' and tumors' characteristics	
	Patients No (%)
Total	59
Male	27 (46%)
Female	32 (54%)
Age (Mean ± SD)	63.49 ± 11.16 years
BMI (Mean ± SD)	24.95 ± 3.56 kg/m^2
ASA	
I	2 (3%)
II	11 (19%)
III	46 (78%)

RESULTS (CONTINUED)

Patients' and tumors' characteristics.	
	Patients No (%)
Median distance tumor from anal verge (range)	7 cm (range; 4-12 cm)
Patients received neoadjuvant CRT*	26 (44%)

RESULTS (CONTINUED)

Operative details	
	Patients No (%)
Rectal resection	
LAR*	53 (90%)
ULAR**	6 (10%)
Median duration of operation (range)	195 min (range; 120-315 min)
Conversion	5 (8%)
Two firing	48 (81%)
Diversion	24 (41%)

RESULTS (CONTINUED)

Post-operative morbidity, treatment, and Clavien-Dindo classification			
Complication	**Patients No**	**Treatment**	**Clavien-Dindo classification**
Total no	10		
Anastomotic leakage	4	3; Transanal anastomotic drainage/antibiotics 1; Hartmann's colostomy	**IIIA** **IIIB**
Postoperative bleeding	3	Blood transfusion (total transfusion 5 unit of blood)	**II**
Wound infection	2	Antibiotics treatment	**II**
Paralytic ileus	1	Conservative treatment	**I**

RESULTS (CONTINUED)

Post-operative course; time to resume eating and length of hospital stay	
	Median in days (range)
Length of hospital stay	10 (6- 28)
Time to resume eating	3 (2- 10)

RESULTS (CONTINUED)

- Overall, there was no recorded mortality during the study period.
- Only one patient developed anastomotic stricture which was treated with regular dilation in outpatients' department, this patient did not show any manifestations of AL.

CONCLUSIONS

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- On expert hands, it is feasible to perform a laparoscopic sphincter-saving TME for rectal cancer patients.
- Justification and selection criteria should be identified for construction of defunctioning ileostomy.
- Individualization of the treatment is important.

THANKS