

PROXIMAL PROTECTIVE STOMA BY LOW ANTERIOR RESECTION OF THE RECTUM – WHEN? HOW? HOW LONG?

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INTRODUCTION

The total rise of the incidence of colo-rectal cancer (CRC) and its mainly localization in the rectum during the last 30 years put new challenges for the surgeons^(3,4). The improvement of the total mesorectal excision (– Heald 1982) as golden standart in the operative treatment of rectal cancer and the ambition for performance of sphincter preserving operations (SPO) in accordance to achiev better quality of life increased the importance of the problems associated to the safety of anastomosis, morbidity and early postoperative mortality⁽²⁾. The anatomical specificity of the distal rectum and perirectal structures increase the risk of anastomotic insufficiency which gains up to 24% and the same time the risk of early postoperative mortality reaches up to 8%^(1,4).

MATERIAL AND METHODS

We set the aim to appreciate the effect and advantage of the appliance of different protective stoma by anterior resection of the rectum (ARR) in our clinic. We have done a retrospective analysis of the results in the operated with ARR patients for three years (2008-2010). There were performed a total of 86 ARR from which 49 by low localization of the tumour (the distal pole of the tumour less than 12cm from linea anocutanea - LAC).

The median age of the 49 patients with low ARR was 68,3 (28-81) and the proportion male/female was 1,2:1 (27:22). On able 1. are presented the patients by gender, according to the distance of the tumour from LAC and according to the stage () of the TNM classification.

In 27 of the patients with low tumour localization a protection of the anastomosis with proximal derivating stoma was done. The intestinal passage was not discontinued.

In 18 cases was done a transverse colon stomy and in two cases a coecum stomy was performed. In 7 cases was done a protective parietal to the abdominal wall ileostomy with proximal tubage 60-70 cm along the gut (“virtual ileostomy”). The “virtual” ileostomies were lavaged trough the tube with 100 ml saline solution 0,9% twice a day starting at the day after the operation until the discharge of the patient.

Table 1. Gender, stage and distance of tumour from lac

Gender	Stage	Distance from lac			Total
		5-7 cm	8-10 cm	10-12cm	
Male	T1	-	-	-	-
	T2	3	1	2	6
	T3	4	8	7	19
	T4	-	-	2	2
Female	T1	-	1	2	3
	T2	1	2	-	3
	T3	3	9	2	14
	T4	-	-	2	2
Total		11	21	17	49

RESULTS

The average operative time in the group of oprated patients with ARR without proximal protective stoma was 162 min. In the goup with performed protective stomas the average duration of the operative procedure was 188 min.

By the patients without proximal protective stoma the flatulency release occurs 3 to 6 days after the operation and the passage recovery average 5,6 (4-8) after the intervention. In the second group the protective stomas have started to function 24 to 72 hours postoperatively. A flatulency crisis with pain and negative symptoms associated with the hemodynamics and respiration was marked in 37 (62%) of the patients with ARR without derivating stomas on the 3rd to 5th day after the operation. Such symptomatic was observed only in 3 (11,1%) of the patients from the second group who were with transverse stomas. A partial, light degree insufficiency of the colo-rectal anashomosis was registred in four patients (10,8%) of the group with low ARR and in one patient (3,7%) with protective stoma. There was no re-laparotomy performed and all the insufficiencies were conservatively treated. No patient of the 86 operated with ARR died in the early postoperative period and the marked mortality was 0%. The post operative in hospital stay in the group without stoma was 14,7 days

(10-26 days), while in the group with protective stoma was 12,2 days (10-22days).

The patients with large bowel stoma were admitted to hospital for operative restitution of the gut passage 1 to 4 months after the ARR intervention. In two cases (10%) an insufficiency of the stoma suture was registred, which enforced operative revision and re-stomy. In 4 other cases after the closure of the tranverse stoma and in one after the closure of the coecum stoma (total 25%) were registred severe inflammations and suppurations of the operative wound where the stoma was. The postoperative morbidity after the closure of protective large bowel stoma was 35%. The letality was 0%. The hospital in stay after the second operation for the patients with large bowel restitution was 7 to 21 days (10,3 days). The tube of the "virtual ileostomies were moved away in outpatient order (ambulatory) 12 to 30 days after the ARR. The "virtual" ileostomies closed spontaneously 1 to 12 days (1,7 days) after the extraction of the tube. A second hospitalization and operative intervention was not necessary for these manipulations but just outpatient observation for 2 to 12 days after the extraction of the tube.

DISCUSSION

The review of the literature about the protection of low colo-rectal anastomosis through proximal stoma showed diametrical contrary attitudes.

While some authors absolutely defend the protective stomas^(7,10,28,29), some others absolutely deny them^(6,11,14,15,20). They base on the higher morbidity associated with the stoma creation, the worse quality of life in these patients and the necessity of second operation to close the stoma^(6,13,20). The opponents of stoma protection mark the higher incidence of complications during the second stage of the operative treatment and stoma closure, as well as the delay of the adjuvant therapy, when such is recommended^(11,14,15).

The defenders of protection underline that the risk of insufficiency increase significantly when the anastomosis is at a distance less than 6cm from LAC, even in some opinions at a distance less than 8-9 cm^(4,7,10). They mark that the protective stoma decompresses the intraluminal gut pressure as well as the intra-abdominal pressure after the operation and facilitate the recovery of the peristalsis^(7,12,17). The patients with proximal protective stomas have rarely flatulency crisis. This avoids the development of the whole consecutive negative symptoms of pain, hemodynamics and respiratory disturbances^(12,18,25). The risk of insufficiency is determined on the anatomical specificity of the distal rectum and pelvic structures, but on the total character of the mechanical anastomosis and on the lack of ampulary part of the remaining rectum also^(2,8,22,25).

Most of the defenders of the protective stomas use to perform ileostomies with or without interruption of the bowel passage, but some of them prefer the large bowel stomas. The benefits of ileostomy are based on its feasibility of cre-

ation and closure^(5,9,16,28). The proximal protective ileostomy decompresses the small gut and the intra-abdominal pressure in the post-operative period and facilitates the restoration of the peristalsis^(14,17,29). It protects the anastomosis, but the opponents underline that when the ileo-coecal valve is competent the decompression of the large bowel is not of full value^(18,19,23). They accent on the lost of nutritive substances and water as well as on the irritation of the skin around the stoma^(6,11,18). That is why some authors use to create "virtual" ileostomies than loop ileostomies^(16,17,24). This kind of stomas posses the decompressive effect, but does not interrupt the gut passage and the anastomosis protection is not as sure as by the diverting ileostomies^(18,24,25). Some others authors defend the tranverse stomas underlining the benefits of the gas decompression effect on the large bowel, the less skin irritation and better physiological effect of them^(12,26,27).

Controversial is also the problem of the duration of the stoma and the term to close it^(16,19,21,25). The routine practice is stomas to be closed 1 to 3 months after the ARR. While for the large bowel stomas there is a consensus that these terms are adequate for the ileostomies the opinions differ significantly^(5,11,21). Some meta-analysis prove that the earlier closure of ileostomies decrease the morbidity, the lost of nutritive substances and betters the life quality of the patients^(11,21,25). That is why some authors prefer to perform "virtual" ileostomies by which the term of closure of stoma is shorter^(16,24,27). Though the term for the extraction of the gut tubage should not be less than 20 days after the ARR, as in our series the only anastomosis insufficiency occurred by a patient whose ileal tube was extracted on the 12th day.

CONCLUSIONS

The proximal protective stoma creation is surer in patients with low ARR when anastomosis is less than 6-8cm distally from LAC.

The "virtual" ileostomy has many benefits than the large bowel stomas.

We consider that all problems and questions about the stoma protection of anterior rectal resections could be object for interesting discussion among the Bulgarian surgeons, still more we did not found consensus on these problems among the foreign authors.

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