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CIRCULAR STAPLER ASSISTED EXTRAPERITONEAL COLOSTOMY TECHNIQUE

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Case report

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Abstract

Temporary or permanent mouthing of the bowel is a very common intervention in surgical practice. Stomas made for different reasons sometimes have a life-saving quality, and sometimes they meet the life long defecation needs of the patients. Colostomies are opened as life saving in emergency colon surgeries. Although there are various colostomy techniques, which technique will be applied is usually decided during the emergency surgery. Colostomy opening may take a long time. The procedure usually takes 30-40 minutes. However, in some cases, it is necessary to compete with time. Our aim in the report is to share with you the general situation of the circular stapler assisted colostomy , which is applied in critical cases.

Key Words: Colostomy, Emergency colon surgeries techniques, Stoma

Özet

Barsağın geçici ya da sürekli olarak dışarı ağızlaştırılması cerrahi pratiğinde oldukça sık başvurulan bir girişimdir. Değişik nedenlerle yapılan stomalar bazen hayat kurtarıcı bir nitelik taşırken bazen de hastaların yaşam boyu defakasyon gereksinimini karşılar. Acil kolon cerrahilerinde hayat kurtarıcı olarak kolostomiler açılmaktadır. Kolostomi teknikleri çeşitli olmasına rağmen hangi tekniğin uygulanacağını genellikle acil cerrahi sırasında karar verilir.

Kolostomi açılması uzun zaman alabilmektedir. İşlem genellikle 30-40 dakika sürer. Ancak bazı vakalarda zamanla yarışmak gerekir. Bildirideki amacımız genel durumu kritik vakalarda uygulanan sirküler stapler yardımlı kolostomi açılmasını sizlerle paylaşmaktır.

Anahtar Kelimeler: Acil kolon cerrahileri, Kolostomi teknikleri, Stoma

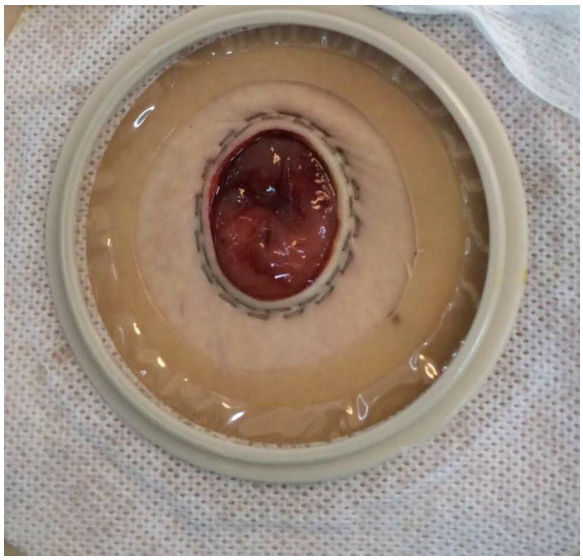
1. Introduction

The opening of the large intestine (colon) to the anterior abdominal wall with an operation is called colostomy. Thus, the intestinal contents are emptied into a bag attached to the abdominal skin. Normally, feces in the large intestines are expelled through the anus. In cases with colostomy, food residues are emptied with a bag attached directly to the abdominal wall. In colostomies, the stoma (ostomy) is usually opened in the lower left side of the abdomen. Colostomies are usually named according to which part of the large intestine they are made. For example; It is named as ascending colostomy,transverse colostomy, descending colostomy and sigmoid colostomy. Depending on where the stoma opens, the consistency of the stool changes. The farther the stoma is from the rectum (anus), the more watery the stool is. Accordingly, if the colostomy is in the ascending colon and the transverse colon, the stool is in a more liquid state, and in the descending colon and sigmoid colon, the stool is solid. Colostomy technique is extremely important in terms of colostomy complications and the patient's quality of life (Nugent, 1999).

2. Case Report

Male patients aged 55, 75, 80, 86 years and females aged 70, 82 years were admitted to our emergency department at different times due to abdominal pain and trauma. One of the patients had lower GIS bleeding due to diverticulum bleeding. The common feature of all patients was that they had ASA 4-5 patients due to various concomitant diseases or bleeding. The patients were taken to emergency surgery. In 2 patients, ileus due to tumor of the distal part of the rectum was detected, abdominoperineal resection and permanent colostomy were performed. Segmental descending colon resection, Hartman procedure and temporary colostomy due to trauma were performed in 2 patients. Segmental descending colon resection, Hartman procedure and

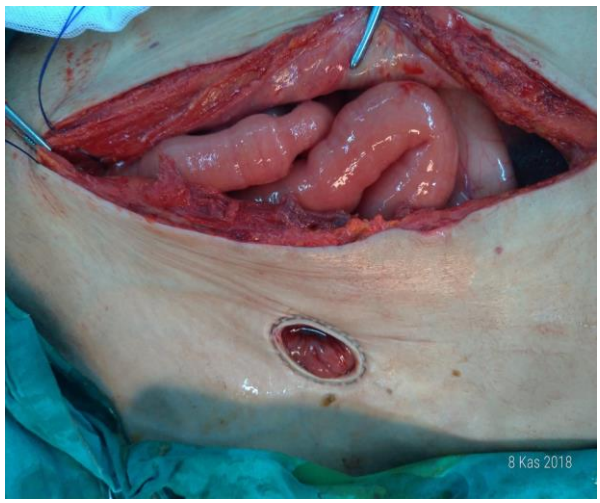
temporary colostomy were performed in 2 patients due to diverticulum bleeding. The duration of the operation lasted approximately 30-50 minutes.



Picture 1. No stoma complications were encountered during the 9 month follow up period of the patients

2.1. Surgery Technique

After the routine surgical colon surgery procedure, after the descending colon was released with splenic flexure, the anvil of the 34 circular stapler was placed at the distal end of the colon with 2/0 prolene. Then, the left lateral peritoneum of the abdomen and the posterior leaf of the rectus muscle were opened with an abdominal approach. The rectus muscle was parted and the anterior leaf of the rectus muscle was opened. Then, the circular no 34 needle was passed through the skin from the anterior abdominal wall and the stapler were fired and a colocutaneous anastomosis was applied.



Picture 2. There were no complications during and after the procedure

3. Discussion

Temporary or permanent mouthing of the bowel is quite common in surgical practice. Stomas made for different reasons sometimes have a life-saving quality while sometimes they meet the life long defecation needs of the patients. Stomas can be temporary or permanent with various indications from different parts of intestinal organs (Mulita, 2022). In general, it is opened after emergency bowel surgery operations, radical surgery of colon and bladder cancer. Our cases, we were opened a stoma due to emergency colon surgery secondary to bowel perforation. Stoma types were opened from both intestinal parts, usually two main types, from the ileum and colon, with various techniques according to the indication (Massenga, 2019) . Ostomies opened from the ileum are usually temporary, except for ileal pouch ileostomies performed after radical bladder cancer surgery (Subiela, 2021) . However, ostomies from colonic segments are rarely temporary, but are usually permanent. In 4 of our cases, temporary colostomy was opened in 2 of our cases. In emergency colon surgeries; Colostomies are opened as life-saving in diverticulum hemorrhage, diverticulum perforation, stab wounds, gunshot wounds, ileus secondary to complete colon occlusion due to tumoral mass located in the distal colon, and distal colon tumor perforationIn our cases, permanent colostomy to ileus secondary to tumor of the distal part of the rectum was performed in 2, temporary colostomy due to trauma in 2, and temporary colostomy due to diverticulum bleeding in 2 cases. Abdominoperinal resection and end colostomy were performed in 2 of the colostomies, and the Hartman procedure was applied to the other 4 colostomies.

Although colostomy opening techniques are varied, the technique to be applied is usually decided during the emergency surgery. Generally, in emergency surgeries, the Hartman procedure and loop colostomy techniques are used to be closed later. Colostomy can take a long time to open. In addition, while colostomies are matured to the anterior abdominal skin, mostly the peritoneum is opened, the anterior fascia of the rectus muscle is opened, the rectus muscle is opened, the posterior fascia of the rectus muscle is opened, and the free end of the colon is fixed to the opened skin with suture materials one by one. This process usually takes 30-40 minutes. However, there are some cases where it is necessary to compete with time. Especially in ASA 4-5 cases, the patient should be taken to surgery as soon as possible and the surgery should be completed very quickly. Here, at least, it is necessary to minimize the time elapsed while the ostomy is opened and matured. All 6 cases that we underwent surgery were ASA 4-5 cases, and after the appropriate surgery, we performed the colostomy opening and maturation using the no 34 circular stapler. About 3-4 minutes, the colon was fixed to the skin of the anterior abdominal wall. Colostomies opened using staplers rarely included in the literature. Peng et al. reported in 2015 that they opened a circular stapler assisted colostomy in laparoscopic abdominoperineal surgery in their study (Peng, 2016). In addition, Giuseppe et al. followed up their patients who underwent stapler assisted colostomy in 20 cases for 13 years and did not encounter serious stoma complications (Giuseppe,2019). This shows us that stoma complications are less common in stapler assisted colostomy opening. However, the only disadvantage we have is the cost due to the staplers. However, considering the time spent on the operating room table and the completion of the surgery of the patient as soon as possible, we think that this disadvantage can be ignored.

4. Conclusion

Stoma complications are less common in stapler assisted colostomy. However, in our opinion, the only disadvantage is the cost of stapler. However, considering the time spent on the operating room table and the completion of the patient's surgery as soon as possible, we think that this disadvantage can be ignored.

Conflicts of interest

The authors declare that there are no potential conflicts of interest relevant to this article.

It was presented as a poster presentation at the Turkish Colon and Rectum Surgery Congress as a summary paper.

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