

Intraoperative bowel decompression: A simple new method

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Dear Editor,

In a patient who had undergone low anterior resection for ovarian and sigmoid colon cancer, I thought about what could I do to ensure the discharge of gas and stool on the patient with the development of ileus and stenosis of the rectal anastomosis line. Nelaton was thin and did not provide fair drainage. It was not technically possible to insert the pezzet catheter. I thought about using the intubation tube as the most ideal material at that moment. I inserted the intubation tube to the proximal part of the stenosis, inflated the balloon, and by occasional irrigation, I was able to provide successful drainage. After adequate cleaning, the sigmoidoscopy revealed a recurrence tumor immediately in the proximal line of the anastomosis line. Pathological diagnosis was done by biopsy and the patient was given Abdomino Perineal Resection.

Then I thought that I could use an intubation tube for decompression of the intestines in the same way on a patient I did laparotomy to treat ileus, based on my previous successful experience. Because other conventional methods I am able to do would cause too much environmental contamination, they make the operation room smell, good cleaning and decompression were difficult to ensure. I used the intubation tube successfully on a patient I operated for Brid ileus, and I recorded the video of the operation.

Then, I used the same method in another patient who developed ileus due to transverse colon tumor.

I wanted to share these experiences with you and with my colleagues to hear about your opinions, thoughts, and contributions. Yours sincerely.

The application of bowel decompression is necessary for the success of surgical technique in patients suffering from ileus. The accumulation of gas and fluid in the intestinal

segment above the obstacle results in to increase in the endoluminal pressure rapidly. As a result of the mechanical effects of this pressure, perforation can occur and which again causes capillary circulation disturbance, resulting in intestinal wall scab and bacterial translocation (3,6). The increase in the endoluminal pressure can also cause Abdominal compartment syndrome by increasing total intraabdominal pressure.

An ideal bowel decompression method for patients with ileus has not been defined so far. Many surgeons have defined different methods of bowel decompression, but there is no method has been defined by all surgeons in agreement (1-3). We have also defined a new simple method for bowel decompression in the presented cases.

70-year-old male patient applied to our clinic with the complaint of abdominal pain and vomiting. The patient's complaints had started two days ago, 15 years after the previous abdominal surgery. In the clinical examination, abdominal distension was observed. In laboratory tests, there is no abnormal value Multiple air fluid levels, dilatation of intestinal segments proximal the obstacle and collapse in distal bowel observed on plain radiography. The obstruction was at the level of the distal small gut. After the conservative management of the intestinal obstruction we have employed bowel decompression with a new method with bridectomy (Figure 1).

81-year-old male patient. He was examined in the palliative service with the complaint of not being able to discharge gas and stool. The patient had severe distension in the abdomen. Bowel sounds were metallic. The general condition was distorted, dehydrated. Rectum was empty in the rectal examination.

3 months ago, after the CT , it was written that there was narrowing segment in the hepatic flexure but the colonoscopy was found to be normal.

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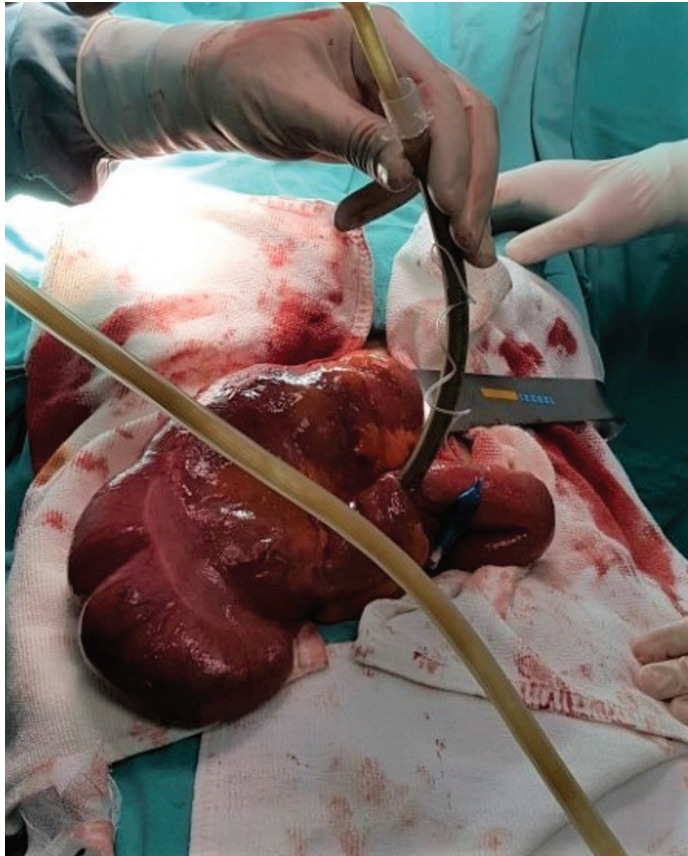


Figure 1. The tumor that narrows the colon, and the intubation tube remaining in the resected material



Figure 2. An intubation tube, number 7,5 or 8

Multiple air fluid levels were determined in the radiography of side of decubitis. In the bt, also ascendant colon ileac and jejunal dilatation, 8 cm narrowing segment in the hepatic flexure was determined.

Intestinal decompression with intubation tube was applied to this patient as well. The operation was completed with right hemicolectomy and ileo-transversostomy.

Figure 2 shows the tumor, the tumor that narrows the colon, and the intubation tube remaining in the resected material.

In this method, we use an intubation tube, number 7,5 or 8. We apply the purse-string suture at the most suitable part of the dilated bowel for decompression. After doing the enterotomy, we safely insert the intubation tube into the intestine, and then we connect the suture and inflate the balloon of the intubation tube. (Figure-2)

We have seen that intestinal decompression is provided very well with this method.

Bowel decompression is recommended in the management of intestinal obstruction (3,4). It is known that, with the intraoperative decompression of the dilated intestine, the abdominal closure gets easier, the respiratory functions are improved more quickly, and the intestinal motility and absorption are restored to normal more quickly also (5). However, there is no method has been accepted by all surgeons in agreement. The best-known method is manual decompression, milking the bowel towards stomach or caudally. And, some new methods have been described (1,2). We have also defined a new method for bowel decompression. The advantages of the method we employed, mentioned above, are as follows. The materials we use in this method are cheap and the most basic materials present in every operating room. The end portion of the tube inside the intestine is cut sloping. This design allows the tube to be easily inserted into the intestine. In addition, it prevents the adhesion of the intestinal mucosa as a result of vacuum effect. Besides, inflation of the balloon prevents leakage around the tube and the space around the inflated balloon also prevents from adhesion of intestinal mucosa to the orifice of the intubation tube. The transparent structure of the tube ensures that the flow of gas and liquid can be seen easily. In addition, the intubation tube is flexible. So, this also prevents unwanted injuries.

In our experience, this simple method is very effective in bowel decompression and applicable in every operating room.

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REFERENCES

1. Simsek G, Kartal A, BAL A. Intraoperatip Barsak Dekompresyonu için Kolay Bir Metod: Laparoskopik Kamera kilifi ile Dekompresyon (Teknik Not) Kolon Rektum Hast Derg 2013;23:205-7.
2. McMahon GS, Eltweri A, Ubhi SS. A simple technique for intraoperative decompression of obstructed bowel. Ann R Coll Surg Engl 2013;5:442.

3. Vincenzo Neri. Management of Intestinal Obstruction, Actual Problems of Emergency Abdominal Surgery, Prof. Dmitry Garbuzenko, edition. InTech, Available from: <https://www.intechopen.com/books/actual-problems-of-emergency-abdominal-surgery/management-of-intestinal-obstruction> 2016.
4. Ansaloni L, Andersson RE, Bazzoli F, et al. Guidelines in the management of obstructing cancer of the left colon: consensus conference of the world society of emergency surgery (WSES) and peritoneum and surgery (PnS) society. World J Emerg Surg 2010;28;5:29.
5. Welch JP. General consideration and mortality in bowel obstruction. In: Welch JP, editor. Bowel obstruction: differential diagnosis and clinical management. Philadelphia: Saunders Company; 1990. p.59-95.
6. Gurleyik G, Ozturk E, Adaleti R, et al. Effects of prostaglandin E1 and E2 analogues on mucosal injury-induced, and on bacterial translocation promoted by, experimental intestinal obstruction. J Invest Surg 2004;17:127-34.