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Department of Surgery and Cancer Management of acute Sigmoid Volvulus

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Abstract:- Sigmoid volvulus is one of the most common causes of bowel obstruction in developing countries.. Sigmoid volvulus make up more than half of all colon obstructions, and a multi-dimensional etiology has been considered, especially in foods that include a high-fiber diet and pre-existing idle sigmoid intestine. It is assumed that these high-fiber nutrients reduce intestinal transit time, leading to unnecessary sigmoid intestinal discomfort. Although disease and mortality statistics play an important role in determining the safety of surgical procedures, information about long-term clinical outcomes greatly influences the widespread acceptance of surgical techniques. The ideal treatment for large bowel obstruction due to sigmoid volvulus not only leads to fewer deaths and patients in the short term, but should also have a lower recurrence rate in the long term. Surgical treatment of volvulus has become the mainstay of volvulus treatment with three surgical techniques: (1) detoursian and mesenteric fold, (2) bowel examination with anastomosis, and (3) Hartman's procedure for the treatment of volvulus.The purpose of this study was to examine and manage the clinical outcomes of patients.

I. INTRODUCTION:

Acute sigmoid volvulus (SV) is a recognized cause of serious obstruction of the colon. Colon volvulus develops as the bowel bends on its mesentery, contributing to obstruction and ischemic shifts. Sigmoid colon (~ 60 percent) is the most common location of volvulus, followed by caecal volvulus (40 percent). Differential diagnosis of acute abdominal obstruction involves SV, intussusception, Ogilvie syndrome, diverticulitis, and others. The much more important etiological aspect to be addressed in adults is that certain anatomical lesions induce (90%) and most (65 percent) neoplasms. Other typical problems are adenopathy, polyps, diverticulitis and trauma. Most surgeons prefer to treat this disease cautiously with colonoscopic decompression, typically due to elderly circumstances. Non-surgical treatment of acute SV prevents surgical risks in the elderly and diminishes patients at high risk of remote, unprepared bowel. However, owing to the high rate of relapse (90 percent) and mortality (40 percent),Preventive care should be used mainly to transfer patients from emergency to semi-evitable surgery. This is uncommon in youths with no medical records, but when the disorder is present in adolescents, doctors must make a crucial decision: (a) cautious care or (b) surgical treatment.

II. MATERIAL AND METHODS

- Patients selection and examination

1. Initial assessment should provide a detailed history and physical examination, full blood cell count, serum electrolytes, and evaluation of renal function.

Popular symptoms of sigmoid and cecal volvulus include abdominal cramping, discomfort, nausea, vomiting, and diarrhea. Physical inspection typically entails abdominal distension, various degrees of reduced or enhanced exposure to intestinal sounds, and sometimes an empty rectum on a digital examination. Duration of signs. Presentation ranges from a few hours to several days, with regular rapid presentations of cecal volvulus, and more frequent presentations of sigmoid volvulus. The recurrent occurrence of co-morbidity in patients with colon volvulus, as well as the risk of electrolyte disruption and severe renal dysfunction related to vomiting and dehydration; support the use of regular blood testing in the assessment. Original for patients suspected of colonic volvulus. Urgent indications with clinical signs of peritonitis or shock associated with colon ischemia or perforation have been reported in 35 percent of patients with sigmoid and cecal volvulus.In addition, the medical history and physical examination, the laboratory blood count and the radiological evaluation are carried out together to avoid delays.

2. Diagnostic imaging for colonic volvulus is initially based on plain abdominal radiographs and often includes confirmatory imaging with a contrast enema or CT imaging.

Plain abdominal X-rays are also helpful in the early examination of patients with presumed colon volvulus. As above, scans may occur early in the process of suspected volvulus, as they can rapidly lead to a diagnosis. Radiographic photos usually show a distended colon loop that may mimic a coffee bean or twisted inner tube extending into the upper abdomen, some Plain abdominal X-rays can also indicate distention of the small intestine with air-fluid and decompressed colon distal to the point of volvulus. In a recently published study, abdominal radiographs were found predictive of diagnosing or diagnosing cecal volvulus in less than half of patients and 51% of patients with sigmoid volvulus. In another recent study, simple abdominal radiographs were diagnosed with sigmoid and cecal and sigmoid volvulus in a significant number of patients.Plain abdominal radiographs may also reveal other conditions that are included in the differential

diagnosis of colon volvulus, as well as complicating factors, such as pneumoperitoneum or pneumatosis.

Risk factors for colonic volvulus development

- **Sigmoid Volvulus**

✓ Chronic constipation
✓ Recurrent obstipation
✓ Laxative dependency
✓ Hirschsprung disease
✓ Diabetes
✓ Neuropsychiatric history
✓ Prolonged bedrest
✓ Chagas disease
✓ Institutional placement

III. MANAGEMENT OF ACUTE SIGMOID VOLVULUS:

1. Rigid or flexible endoscopy should be performed to assess sigmoid colon viability and to allow initial detorsion and decompression of the colon.(Strong recommendation)

In the absence of colonic ischemia or perforation, endoscopic detortion is the initial therapy for sigmoid volvulus, and is successful in most patients. In rare situations where the transition point is outside the shorter range, detortion can be done using a rigid or flexible sigmoidoscopy or colonoscopy. After successful distortion of the sigmoid colon, the decompression tube should usually stay in position for 1 to 3 days in order to sustain the reduction, ensure continuous decompression of the colon and promote the preparation of the mechanical intestines as required. Care must be taken in choosing cases for endoscopic twisting, and endoscopic operation should not be considered in cases with signs and symptoms of intestinal ischemia or perforation. If advanced mucosal ischemia, perforation or impending perforation of the colon is observed during endoscopy, a new surgical technique should be discontinued.

2. Urgent sigmoid resection is generally indicated when endoscopic detorsion of the sigmoid colon is not possible and in cases of nonviable or perforated colon.(Strong recommendation)

Immediate surgery for sigmoid volvulus may induce endoscopic distortion in15 percent of patients and may complicate early presentation in 20 percent of patients with colonic ischemia, perforation, peritonitis, or septic shock. Natural circulation should usually be carried out without distorting and at least influencing the intestinal rebound, avoiding the release of endotoxin, potassium and bacteria, and preventing colon perforation. The determination to perform primary colorectal anastomosis, deceased colorectal anastomosis, or final descending colostomy must be distinguished by the patient and the general state of the colon following removal of the vulvized portion of the colon. This technique is given as an indication in a number of consecutive cases. Hartmann was used mostly in patients with unrespectable colon or peritonitis which resulting in postoperative problems and death, whereas anastomotic leakage happened in a lower number of patients in the anastomosis community. The Hartmann technique is the most commonly performed emergency treatment in the highest recorded series of patients with sigmoid volvulus, with an average prevalence of 40% and a mortality rate of 20%.

The purpose of laparoscopic surgery in emerging colorectal operations is still established and some data are available on laparoscopic surgery of emerging sigmoid valves. A new comparison of open and laparoscopic patients found a double spike in anastomotic leakage in the latter category and a comparable postoperative patient as a whole. Other results, published in many international journals, show that the laparoscopy method of professional surgeons in this procedure is, in several cases, a feasible alternative to laparotomy.

3.Sigmoid colectomy should be considered after resolution of the acute phase of sigmoid volvulus to prevent recurrent volvulus.(Strong recommendation)

Of the various operative interventions described for sigmoid volvulus, sigmoid colostomy is an intervention with colorectal anastomosis that is permanently effective in preventing recurrent volvulus events. The entire length of the inferior colon should be removed to reduce the risk of subsequent recurrent valves. Abdominal formation is not usually required in non-emergency situations and should be considered in cases based on patients' operative outcomes and unique circumstances. In patients with sigmoid volvulus and concurrent megacolon, subtotal colectomyhas been shown to more effectively inhibit volvulus than sigmoid colitis alone. In patients with sigmoid valves and functional, non-perforated intestines, sigmoid resection with colorectal anastomosis results in lower patient and mortality rates ranging from 0 to 10. Given the redundancy and mobility of the colon in patients with sigmoid volvulus, the laser can be performed with a mini-laparotomy or laparoscopy, although the potential benefits of a laparoscopic approach in this setting are not clear.

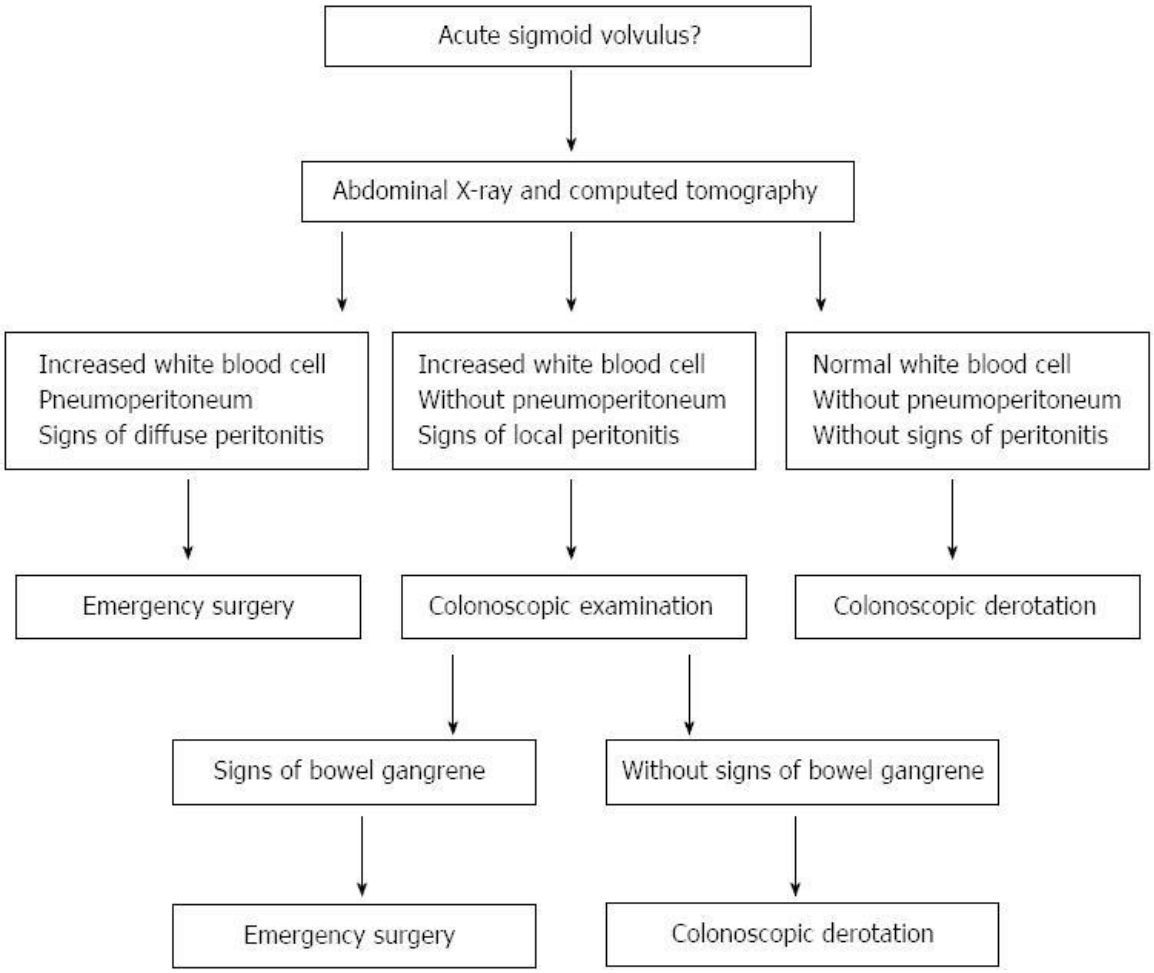
4. Non-resectional operative procedures, including detorsion alone, sigmoidoplasty, and mesosigmoidoplasty, are inferior to sigmoid colectomy for the prevention of recurrent volvulus.(Weak recommendation)

Operative detortion alone, detortion with intraperitoneal or extraperitoneal fixation (sigmoidopexy) and tailoring of sigmoid mesentery to widen its base and prevent torsion (mesosigmoidopexy) are non-resection procedures established for the definitive treatment of sigmoid volvulus in viable colon patients. Although recurrent volvulus after sigmoid resection is typically an unusual phenomenon, recurrence after non-resection techniques is more variable. Detortion and extraperitoneal fixation of sigmoid colon in a number of successive cases of which no recurrence has been observed. In smaller series, recurrence after sigmoidopexy was reported to be 30%. Similarly, in a number of reported cases, there were no frequent occurrences of volvulus following meso-sigmoidoplasty in the case of meso-sigmoidoplasty. However, another important sequence of observed

mesosigmoidoplasty culminated in a 21 per cent recurrent sigmoid volvulusWhile there are limited statistics on operative detortion alone, with the bulk of data coming from older retrospective studies, related morbidity is 30%, with 11 per cent deaths and 48 per cent chronic sigmoid volvulus, which has led many researchers to avoid the use of this intervention.

5.Endoscopic fixation of the sigmoid colon may be considered in select patients in whom operative interventions present a prohibitive risk. (Grade of Recommendation: Weak recommendation)

Sigmoid volvulus is most often found in older patients, some of which may be unfit for abdominal function. In this group of patients, several minor cases studied specialised endoscopic procedures as a minimally invasive device to avoid persistent sigmoid volvulus. Percutaneous endoscopic colostomy (PEC) procedure is used to restore the sigmoid colon on the anterior abdominal wall, limiting its movement in order to avoid repeated volvulus. Colon fixing is done with percutaneous colostomy tube alignment with or without fasteners or laparoscopic assistance. .Then, PEC seems to be a valuable method for the treatment of sigmoid id volvulus, but further tests are required to assess its longevity. At present, this should be reserved for patients in general, where existing operative interventions are justified in order to achieve a small degree of harm.



IV. DISCUSSION

Sigmoidectomy is the safest option during emergency laparotomy because conservative therapy (detortion, sigmoidopexy, and mesosigmoidoplasty) has a high risk of recurrence. Chance of recurrence is 44 per cent after detortion without resection and 30 per cent after sigmoidopexy. Indications for various surgical procedures have evolved over recent years. The Origin Hartmann technique was systematic following an emergency sigmoidectomy. It was later confined to cases of gangrene. Today, the Hartmann method is prescribed where the general and local conditions (perforation and/or abnormal hemodynamics) are not desirable. As for the ESPA signs, major intraoperative lavage has been adopted to increase the protection of anastomosis. Today, ESPA without colonic lavage has been seen to be healthy and applied to selected cases of gangrene with good results.

V. CONCLUSION

Early sigmoid colectomy was associated with fewer diseases and was considered safer in the elderly, and the results suggest that early surgery is associated with lower rates of radiation and complications, with index surgery being more preferred. Alternate immediate surgery. Strict

sigmoidoscopy is the safest method of decompression as the gateway to indexing surgery and is not associated with any difficulties in this range.

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