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CASE REPORT

CHRONIC SIGMOID VOLVULUS

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ABSTRACT

Sigmoid volvulus generally presents as either an acute fulminant colonic obstruction progressing to gangrene and shock in twenty-four hours or a sub-acute presentation with a complete colonic obstruction of about two to three days duration. However, chronic sigmoid volvulus as a cause of chronic persistent abdominal distension and constipation, to our knowledge, has not been described in patients who otherwise have no preexisting colonic dysmotility disease. We present three patients with chronic persistent abdominal distension and constipation due to chronic sigmoid volvulus . Their clinical presentation, means of diagnosis, intraoperative findings, and treatment are discussed.

Key Words: *colonic obstruction, Sigmoid Colon ,Volvulus, Chronic.*

INTRODUCTION

Sigmoid volvulus generally presents as either acute fulminant colonic obstruction progressing to gangrene and shock in twenty-four hours or a sub-acute presentation with a complete colonic obstruction of about two to three days duration (1, 2,3,4,5).

Sub-acute progressive type, sometimes referred to as the sub-occlusive type, is characterized by insidious onset, and progression and frequently occurs in elderly patients. It often shows an unspecific clinical presentation characterized by a widespread cramp like abdominal pain, sometimes localized in the left abdominal quadrants. (4,5)

Some patients with sigmoid volvulus report similar previous attacks which resolved spontaneously. The literature also repeatedly mentions the possibility of spontaneous remissions and attributes it to a partial or rotation of 180 degrees only (6,7).

Painless chronic sigmoid volvulus is described in the literature in a 59 yearold patient who has been suffering from constipation and abdominal distention with the need for regular enemas since childhood (8). However, to the best of our knowledge, that there has been no mention in the literature of a situation where volvulus of the sigmoid colon developed in patients who previously had normal bowel habits, will remain persistent for one or another reason and lead to a chronic partial colonic obstruction.

Patients affected by such a condition may not seek medical attention immediately because of mild symptoms which consist of constipation and vague abdominal distension with out real failure to pass feces and flatus associated with severe crampy abdominal pain.

In this report, we present three such patients who presented with a chronic partial colonic obstruction of eight months and more due to partial volvulus of the sigmoid colon to the Gondar University Hospital (GUH).

CASE PRESENTATIONS

Case I: A fifty-five year old man presented with a progressive and persistent abdominal distension and a vague abdominal pain for duration of one year. He gave history of passage of a scanty amount of stool

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and mucus every 3- 5 days. He had no rectal bleeding, vomiting or weight loss. He has no history of attack of colicky abdominal pain or complete failure to pass feces & flatus. He is from a rural area and had never been treated for his complaints. He has no past history of any major medical or surgical problem.

On physical examination, the patient looked healthy except for an obvious grossly distended abdomen. Vital signs were within normal limits. The abdomen was grossly distended, non tender and hypertympanitic on percussion. Digital rectal examination revealed an empty rectum. All other systems were normal. Plain abdominal x-ray was suggestive of sigmoid volvulus. The patient was then admitted, underwent bowel preparation and operated.

Intraoperatively the sigmoid colon was found to be massively distended, rotated 180 degrees clockwise with a moderately thickened mesentery. The colon proximal to the sigmoid was also distended. The apex of the distended sigmoid colon was residing under the diaphragm displacing the stomach to the left. There were few thin fibrous adhesions between the apex of the sigmoid colon and the anterior part of the diaphragm close to midline. Resection of the sigmoid colon and an end to end anastomosis was done. The patient who had an uneventful recovery and follow up at three and six months, didn't reveal any abnormality.

Case II: A 25-year old lady presented with a progressive unrelenting abdominal distension for duration of eight months. She had no abdominal pain except for a mild discomfort which was in fact thought to have been pregnancy. She had constipation and passed scanty stool and mucus every 2-3 days. She had no history of attacks of colic or complete failure to pass feces and flatus. She has no history of rectal bleeding or diarrhea. No intervention had ever been made for her complaints except a self-administered antacids for the discomfort she had. She had no previous history of major medical or surgical illness. The patient was referred from a hospital in a nearby town (Bahirdar) with the suspicion of colonic cancer.

On physical examination, she was healthy looking with no abnormality except for a grossly distended nontender abdomen which was hypertympanitic. Per rectal examination revealed an empty rectum. Barium enema (done in the referring hospital a month prior to her presentation to our hospital) showed the outline of a hugely dilated, twisted sigmoid colonic loop with a bird beak appearance but with a passage of some barium to the descending colon as well.
The patient was admitted and operated on after bowl preparation. Intra-operatively the sigmoid colon was found to be hugely distended and twisted 180 degrees clockwise with thickened mesentery, the colon proximal to the twist was also distended. Resection of the sigmoid colon and end to end anastomosis was done. On the seventh post-operative day she developed signs of anastomotic leak and was re-operated. Breakdown of the anastomosis which was found out was managed by Hartmann's colostomy. She was later discharged and appointed to come back for colostomy closure.

A few days before her appointment for readmission for colostomy closure, she developed generalized peritonitis and sepsis as a result of a perforated small bowel obstruction due to adhesion to the site of the colostomy. Unfortunately, she succumbed to the sepsis despite re-laparatomy and supportive care.

Case III: A 39-year old man presented with a progressive unrelenting abdominal distension and occasional cramps of nine-month duration. He passed scanty stool and mucus 2-3 times a week. He never had history of complete failure to pass feces and flatus, with no history of rectal bleeding or diarrhea, either. He had no history of intervention for his complaints nor past history of major medical or surgical illness.

On physical examination, the patient was healthy-looking with normal vital signs. His abdomen was grossly distended,non tender, and hypertympanitic. Rectal examination revealed empty rectum. All other system examinations were normal with plain abdominal radiograph suggestive of sigmoid volvulus. The patient was admitted and started on the standard regimen of bowel preparation with fluid diet, laxatives, and cleansing enema for 3 days. But his surgery was cancelled due to operation room problems. Also his bowel preparation had to be continued for two more days during which his abdominal distension disappeared completely. He claimed it was the first time in nine months.

The intra-operative finding was a redundant sigmoid (elongate sigmoid colon with widened lumen and moderate mesenteric thickening). The sigmoid colon was resected and an end to end anastomosis was done. The patient recovered uneventfully and had no complaints during the subsequent follow up visits at 2 and 6 months.

DISCUSSION

Volvulus of the sigmoid colon is the leading cause of colonic obstruction in particular, and intestinal obstruction in general, both in Gondar and in our country at large. Two previous studies done in this hospital rated sigmoid volvulus at 56 and 58 percent of all causes of intestinal obstructions, respectively (9,10,11).

The disease typically presents as an acute or subacute obstruction of the colon with patients often experiencing a failure to pass faeces and flatus, crampy abdominal pain and abdominal distension. Some of these patients progress to gangrene and septic shock in less than 24 to 48 hours. This type of progress has been classified as acute fulminant (1,3). The rest present with a less dramatic course that may last 1-3 days prior to definitive medical attention, even though they may be completely obstructed. (3,4,5)

Many patients with sigmoid volvulus give a prior history of recurrent attacks of colonic obstruction which resolved spontaneously or by rectal tube deflation. The signs and symptoms of the obstruction including the distension subside in between the attacks. In his study in Eritrea, Alexander Gurovsky, attributed this phenomenon to incomplete or sub-volvulus (7).

The three patients discribed in this report presented with incomplete but persistent colonic obstruction caused by sigmoid volvulus manifested by persistent, unrelenting, and progressively increasing abdominal distention lasting several months. Chronic sigmoid volvulus causing such a chronic incomplete or partial colonic obstruction, to our knowledge, has never been reported or described in patients with no previous history of colonic dysmotility(8).

In one of our patients presented above (case –I), the partial twist of the sigmoid colon might have been sustained due to adhesions with the diaphragm. This may have also prevented it from progressing to a complete volvulus and acute obstruction. Therefore, it remained in the half twisted position and caused the patient to experience such a dramatic clinical condition. In the other two patients also, despite the absence of an apparent pathological reason, we believe that a certain anatomical or constitutional factor played a role for the sigmoid colon to remain in the half twisted position chronically.

In one of our patients (case-III),although no obstructed sigmoid colon was found intraoperatively, the finding of a redundant sigmoid colon with a dilated lumen, an elongated sigmoid loop, and a thickened mesosigmoid (the typical intraoperative findings seen during elective sigmoid resection for sigmoid volvulus) suggested that the patient had sigmoid volvulus. The clinical evaluation of the patient on admission was that of a chronic colonic obstruction, and the finding of an abdominal x-ray (taken at presentation) suggestive of sigmoid volvulus made the diagnosis of chronic volvulus of the sigmoid which got deflated and untwisted during bowel preparation almost certain.

Because of the unusual nature of such a clinical presentation of sigmoid volvulus, arriving at a diagnosis must be difficult. Pregnancy was considered to be the cause of prolonged abdominal distension in our female patient whose referring physician's diagnosis was colonic cancer despite a barium enema study which was suggestive of sigmoid volvulus, a fact that demonstrated the high probability of misdiagnosis. Sigmodoscopic or rectal tube deflation was also not attempted on any of the three patients as the diagnosis was not considered preoperatively.

Therefore, chronic volvulus of the sigmoid colon has to be considered as a differential diagnosis in a patient with an unrelenting progressive abdominal distension over period of several months with passage of scanty stool and mucus every 2-3 days and absence of remarkable abdominal cramps. Physical examination reveals a relatively healthy patient except for a hugely distended abdomen which is nontender and hypertympanitic..

In a country like Ethiopia, where sigmoid volvulus is very common, a longstanding persistent volvulus of the sigmoid colon ,more appropriately called chronic sigmoid volvulus, should be included in the differential diagnosis of patients presenting with persistent abdominal distension and constipation over a period of weeks or months. Although such a chronic colonic obstruction should always make one consider colonic cancer first, chronic sigmoid volvulus should also be considered as a differential diagnosis, specially in high incidence areas like Ethiopia .Plain abdominal x -ray or barium enema can help establish the diagnosis. Sigmoidoscopic evaluation may also be needed to rule out colorectal carcinoma. Other differential diagnostic conditions include colonic stricture arising from tuberculosis, diverticulitis, ischemia or endomrtriosis.

Should the diagnosis be made, deflation should initially be considered, preferably sigmoidoscpy guided and if successful, elective resection may be done after bowel preparation (12,13).

We present these cases as the first Ethiopian report of chronic sigmoid volvulus as a surgically treatable cause of chronic partial colonic obstruction causing persistent abdominal distension and constipation.

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