

## Case Report

# Acute Intestinal Obstruction Due To Gangrenous Sigmoid Volvulus: A Case Report

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**Abstract:** Sigmoid volvulus is an unusual but an important cause of intestinal obstruction. It is associated with a high mortality especially when there is delayed diagnosis or when there is presence of gangrenous changes. The incidence of sigmoid volvulus is reducing in western world. We hereby report an interesting case of intestinal obstruction due to gangrenous sigmoid volvulus. Patient was fortunate to survive this event.

**Keywords:** Sigmoid volvulus, gangrene, obstruction

## INTRODUCTION

Sigmoid volvulus is a serious condition wherein there is an abnormal twisting of bowel on its own mesenteric axis [1]. Sigmoid volvulus is the most common type of volvulus accounting for 5-7% of all intestinal obstruction [2]. Infact the incidence of sigmoid volvulus is decreasing in the west<sup>1</sup> and it accounts for around 10% of colonic obstruction in west [3].

Chronic constipation is the most common symptom of sigmoid volvulus [2]. The diagnosis of sigmoid volvulus is clinical and radiological [4]. Various surgical procedures have been advocated [4] for sigmoid volvulus, each having its own merit and demerits.

We report an interesting case of acute large bowel obstruction due to gangrenous sigmoid volvulus that underwent resection and primary anastomosis.

## CASE REPORT

A 55 year old elderly patient presented with history of pain abdomen and distention since 3 days. He also had constipation since 3 days and he did not pass urine for last 48 hours. Patient also gave history of on and off pain abdomen for last 10 years. On general examination, patient had pulse rate of 130/min, respiration of 26/min and Blood pressure of 126/66mmHg. Patient was afebrile.

Abdomen was grossly distended and tense. He had generalized tenderness, guarding and rigidity. Bowel sounds were absent.

His blood investigation showed haemoglobin-17.9g%, total count – 16,600, platelets – 2.95lacs, prothrombin – 19.6, INR – 1.6, S creatinine-0.8mg%. His liver function test, amylase, lipase and serum electrolytes were normal. His ABG showed metabolic acidosis (pH-7.3, PCO<sub>2</sub>-20.9, PO<sub>2</sub>-88 and HCO<sub>3</sub>-10.1).

An abdominal x ray showed features of large bowel obstruction and ultrasound abdomen showed moderate ascitis with extensive gaseous shadows and dilated bowel loops.

Patient underwent emergency exploratory laparotomy which revealed a massively dilated, gangrenous sigmoid volvulus with one and half twist around its mesenteric axis (Fig. 1) and 500ml of serous peritoneal fluid.



Fig. 1: Showing the gangrenous sigmoid volvulus. s

SPatient underwent resection of gangrenous sigmoid colon and end to end primary anastomosis of colon. Patient also underwent Suprapubic catheterization due to difficult preoperative urethral catheterization. Patient recovered well postoperatively and sutures were removed on 12<sup>th</sup> postoperative day.

## DISCUSSION

Sigmoid colon followed by caecum is the two most common sites of volvulus accounting for around 75% and 22% of all the cases [5]. The other rare sites are transverse colon and splenic flexure [6].

The common etiological factors predisposing to a sigmoid volvulus are long sigmoid loop with a narrow mesentery, constipation, dysmotility, intellectual impairment, high fibre diet, use of laxatives and chaga's disease [2, 3, 5, 6]. Most of these patients presents with abdominal pain, obstipation, vomiting and abdominal distension [5].

The diagnosis of sigmoid volvulus is made by clinical examination and radiological investigation. X ray alone can diagnose sigmoid volvulus in 85% of cases [5]. A "coffee bean" or "omega loop" sign is seen classically on X ray abdomen whereas barium enema shows pathognomic "bird's beak sign" [2, 5].

Once diagnosed as sigmoid volvulus, some form of intervention is required as only 2% of cases detort spontaneously [3].

When there is no evidence of gangrene, urgent sigmoidoscopic decompression with rectal tube placement can be done in acute cases [2, 5]. Various types of surgical intervention has been described for sigmoid volvulus like sigmoidectomy with primary anastomosis, Hartmann's procedure, Paul Mikulicz procedure, sigmoidopexy, laparoscopic assisted sigmoid colectomy, etc [3, 4].

Today, single stage resection and primary anastomosis has become popular among colorectal surgeons dealing with an obstructed left sided colon [6].

The mortality rate for sigmoid volvulus ranges from 1-9% for viable colon and around 25% in cases of gangrenous bowel [7]. The incidence of recurrent volvulus after resection ranges from 24% to 33% [7].

## CONCLUSION

Sigmoid volvulus is a surgical emergency occurring in elderly. It has a high mortality especially in cases of gangrenous bowel. Resection with primary anastomosis is a safe procedure in stable patients.

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