



## SIGMOID VOLVULUS - OUR EXPERIENCE IN A TERTIARY CARE HOSPITAL

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**ABSTRACT** Volvulus describes a condition in which a segment of bowel becomes twisted on its own mesenteric axis resulting in complete or partial obstruction. Compromised blood supply along with increase in intraluminal pressure leads to gangrene and perforation if unrelieved. Volvulus is generally uncommon and the colon is the most common part of GIT to form a volvulus. The most frequent site is the sigmoid colon. The other sites include caecum, ascending colon and transverse colon. In vast majority of cases, sigmoid volvulus is an acquired condition resulting from elongation of sigmoid loop and stretching of sigmoid mesocolon. In the developed world, sigmoid volvulus occurs in elderly and frail patients with illness. Therefore, initial treatment in absence of large bowel gangrene and peritonitis consists of detorsion by sigmoidoscopy and trans rectal intubation as described by BRUDSGAARD. Failure to achieve detorsion, clinical evidence or suspicion of perforation requires emergency laparotomy. Sigmoid volvulus accounts for 2-3% of all intestinal obstructions and accounts for 85% of all cases of colonic obstruction. Males are more affected compared to females. In this study the clinical course and manifestations and treatment modalities and outcome are analyzed.

**KEYWORDS :** Sigmoid volvulus, detorsion, intestinal obstruction.

**INTRODUCTION**

Volvulus describes a condition in which a segment of bowel becomes twisted on its own mesenteric axis resulting in complete or partial obstruction. Compromised blood supply along with increase in intraluminal pressure leads to gangrene and perforation if unrelieved. Volvulus is generally uncommon and the colon is the most common part of GIT to form a volvulus. The most frequent site is the sigmoid colon. The other sites include caecum, ascending colon and transverse colon. In vast majority of cases, sigmoid volvulus is an acquired condition resulting from elongation of sigmoid loop and stretching of sigmoid mesocolon.

In the developed world, sigmoid volvulus occurs in elderly and frail patients with illness. Therefore, initial treatment in absence of large bowel gangrene and peritonitis consists of detorsion by sigmoidoscopy and trans rectal intubation as described by BRUDSGAARD. Failure to achieve detorsion, clinical evidence or suspicion of perforation requires emergency laparotomy. Sigmoid volvulus accounts for 2-3% of all intestinal obstructions and accounts for 85% of all cases of colonic obstruction. Males are more affected compared to females. In this study the clinical course and manifestations and treatment modalities and outcome are analyzed.

**AIMS AND OBJECTIVES**

- To study the clinical course and manifestations of sigmoid volvulus.
- To access the proportion of patients undergoing sigmoidopexy, resection and colostomy (Hartmanns), resection and anastomosis.
- To study the outcome following these methods of treatment

**MATERIALS AND METHODS**

- This is a cross sectional observational study
- This study was done in 16 patients who presented to general surgery emergency, between September 2020 – August 2022, King George Hospital, Visakhapatnam
- The study is done after obtaining detailed history, complete general physical examination and systemic examination
- All investigations and surgical procedures were carried out with proper informed and written consent as appropriately.

**Inclusion Criteria**

- All the patients who have attended surgery opd and emergency department with large bowel obstruction.
- Those who gave valid informed consent.

**Exclusion Criteria**

- All large bowel obstruction representing as emergency other than sigmoid volvulus is excluded.
- Those who are not willing to participate in the study.

**RESULTS****Showing Age Distribution And Sex Distribution**

Age in years	Number of patients	Percentage
21-30	1	6.25
31-40	2	12.5
41-50	3	18.75
51-60	6	37.5
>65	4	25
<b>TOTAL</b>	<b>16</b>	
Sex	Number	Percentage
Male	9	56.25
Female	7	43.75

**Modes Of Presentation**

SYMPTOMS	NUMBER OF PATIENTS	PERCENTAGE
Pain Abdomen	13	81.25
Constipation	14	87.5

Abdominal distension	16	100
Vomiting	6	37.5
Oliguria	2	12.5
Fever	3	18.75

**Showing Physical Signs**

SIGNS	NUMBER OF CASES	PERCENTAGE
Abdominal distension	16	100
Dehydration	10	62.5
Abdominal tenderness	12	75
Rigidity	4	25
Absence of bowel sounds	11	68.75

**PROCEDURE**

PROCEDURE	NUMBER OF PATIENTS	PERCENTAGE	CURED	EXPIRED
Sigmoidopexy	3	18.75	3	0
Resection and Anastomosis	9	56.25	5	4
Hartmann's	4	25	2	2

**WOUND INFECTION**

PROCEDURE	WOUND INFECTION	PERCENTAGE
Sigmoidopexy	1	33.3
Resection and anastomosis	4	44.4
Hartmann's	2	50

**DISCUSSION**

- Sigmoid volvulus is one of the life threatening surgical emergency and is one of the important differential diagnosis of large bowel obstruction.

- This study of 16 cases of sigmoid volvulus has been analyzed. Age, sex, symptoms and signs, investigations and operative findings are analyzed.

- Differential surgical options for sigmoid volvulus has been compared with each other. We have performed this study with the objective to elucidate which surgical technique is better suited in limited resource centre and patient with poor general condition.

- In present study of 30 large bowel obstruction which were studied of which 16 of them were sigmoid volvulus.

- This high incidence of sigmoid volvulus among large bowel obstruction is due to consumption of high fibre diet, irregular bowel

habits which appear to overload colon and eventually rotate around its mesentery.

- The male and female ratio is variable and there is male predominance than females.
- In our study all the patients presented with symptoms of duration between 1 to 10 days.
- The main symptom of sigmoid volvulus in our study is abdominal distension which is the most common symptom. It is also the most common sign.
- Almost all our cases has been diagnosed clinically and with the help of X-rays.

**CONCLUSION**

- Sigmoid volvulus is more common in males than females and highest incidence in 5<sup>th</sup> and 6<sup>th</sup> decade of life.
- Emergency laparotomy conducted in all the cases. The outcome of the surgical procedures like derotation and fixation to abdominal wall had a cure rate of 67% and recurrence of 34%.

These procedures were carried out on viable bowel.

- Mortality was observed to be almost same in procedures like resection anastomosis and Hartmann's procedure which were carried out in viable and gangrenous bowel.
- As in our study most of the patients were elderly debilitated patients and with poor general condition and co-morbidities, so anastomotic leak was seen in this group.
- Understandably, the mortality was more in patients with gangrene than without gangrene.
- Diagnosing preoperatively by clinically and X-rays helps in prompt management of sigmoid volvulus early.
- When the sigmoid colon was viable, resection end to end anastomosis was carried out but in gangrenous and patients with poor general condition, Hartmann's was carried out to avoid leak.
- In old debilitated patients with associated gangrenous bowel Hartmann's procedure was conducted. This has got high mortality.
- The overall mortality was 37.5% in this study.

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