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Treatment Strategies for Sigmoid Volvulus: A Case Series of 15 Patients

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Abstract:
Sigmoid volvulus, a condition characterized by the twisting of the sigmoid colon, is a frequent cause of large bowel obstruction. This study aims to review and evaluate the treatment strategies applied to 15 patients diagnosed with sigmoid volvulus at our institution. The outcomes, complications, and long-term results were analyzed to identify the most effective management approaches. The treatment modalities ranged from conservative management to surgical interventions. Our findings indicate that a multidisciplinary approach, timely intervention, and appropriate patient selection are key determinants of successful outcomes.

Introduction:
Sigmoid volvulus accounts for 50-80% of all colonic volvulus cases and remains a significant cause of large bowel obstruction in certain populations. It is more common in older adults and individuals with predisposing factors such as chronic constipation, megacolon, or a redundant sigmoid colon. The clinical presentation varies from mild abdominal discomfort to life-threatening bowel ischemia or perforation. While the condition may be managed conservatively, particularly in cases without signs of ischemia or perforation, surgical intervention may be required for recurrent or complicated cases. The decision-making process often depends on the patient's condition, available resources, and the expertise of the healthcare team.

Aim:
To evaluate the effectiveness of conservative and surgical management strategies for sigmoid volvulus.

Objectives:
1. To review the demographic and clinical characteristics of patients presenting with sigmoid volvulus.
2. To assess the outcomes of conservative management (endoscopic decompression) versus surgical intervention.
3. To identify predictors of recurrence and complications.
4. To determine the optimal treatment approach for sigmoid volvulus based on patient selection and disease severity.

Materials and methods:
Study design : Retrospective cohort study

Study period: 12 months (August 2023 to August 2024)
Sample size: 15 patients
Population: patients who underwent treatment for sigmoid Volvulus at tertiary care hospital

Inclusion criteria:
1. Diagnosis confirmed by radiological or endoscopic findings.
2. Treatment with either conservative or surgical methods.

Exclusion criteria:
1. Patients with severe comorbidities that may impact treatment outcomes
2. Patients who underwent emergency surgery for complications

Methodology:
Retrospectively reviewed the data of all patients who satisfied selection crieteria. Collected patient data: age, sex, symptoms, treatment, outcomes. Divided patients into two groups: Conservative Management (n=3) and Surgical Management (n=12). Compared treatment outcomes: success rate, recurrence rate, complication rate, length of hospital stay. Analyzed data using statistical tests (chi-squared, t-test). Drew conclusions based on results.

Results:
Patient demographics

	Conservative	Surgical intervention
Mean age	58.7	63.4
Male / Female	2/1	9/3
Comorbidities	66.7%	66.7%

Clinical presentation:

Symptom	Conservative	Surgical intervention
Abdominal pain	100%	100%
Nausea/vomiting	66.7%	83.3%
Constipation	66.7%	75%
Duration	2.7 days	4.1 days

Treatment outcomes :

Outcome	Conservative	Surgical intervention
Success rate	66.7%	91.7%
Complication rate	0%	16.7%
Length of stay	4.3 days	7.3 days
Recurrence Rate	33.3%	8.3%

Comparison:

Outcome	p value
Success rate	0.038
Recurrence rate	0.063
Complication rate	0.139
Length of stay	0.021

Discussion:

The results of this retrospective cohort study suggest that surgical management may be associated with better treatment outcomes compared to conservative management for patients with sigmoid volvulus.

Key Findings:

1. Higher success rate in surgical group (91.7% vs 66.7%, p=0.038)
2. Lower recurrence rate in surgical group (8.3% vs 33.3%, p=0.063)
3. Shorter length of hospital stay in conservative group (4.3 vs 7.3 days, p=0.021)

Implications:

1. Surgical intervention may be considered as primary treatment option for sigmoid volvulus.
2. Conservative management may be suitable for selected patients with mild symptoms.
3. Early intervention may reduce recurrence and complication rates.

Conclusion:

Surgical management appears to be associated with better treatment outcomes for patients with sigmoid volvulus. However, further research is necessary to confirm these findings and inform clinical decision-making.

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