



Meta-Analysis of Spectrum of Subacute Intestinal Obstruction (Saio) In a Tertiary Care Centre – A Review of 50 Cases

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Date of Submission: 25-11-2020

Date of Acceptance: 15-12-2020

ABSTRACT: BACKGROUND: Subacute intestinal obstruction (SAIO) implies incomplete, intermittent, or recurrent obstruction. The diagnosis of SAIO is usually delayed and several patients continue to suffer from symptoms for weeks and months due to the waxing and waning nature of the disease.

OBJECTIVE: To see the clinical presentation, etiology, type of management and short-term outcome of the patients of SAIO.

METHOD: This retrospective meta-analysis was performed in the Department of General Surgery, Hi-Tech Medical College and Hospital, Bhubaneswar, over a period of two years. A total of 50 diagnosed cases of SAIO who were admitted during the study period, were taken as patients. Patients with acute strangulated and complicated intestinal obstructions were excluded from the study.

RESULTS: Males were predominant than females in this study. Total number of males were 72.0% and total number of females were 28.0%. Maximum patients (90.0%) had abdominal distention. Duration of symptom was <1 month in 41.0% cases, 1–3 months in 31.0% cases and >3 months in 28.0% cases. Among the total cases, 60% patients had a previous history of abdominal surgeries. In our study, 70% patients were treated conservatively and 30% patients had undergone Surgery. Exploratory Laparotomy with adhesiolysis was the most common performed procedure followed by Resection Anastomosis. According to etiology, 44.5% of cases had adhesions, 33.3% had chronic constipation, 13% small/large gut adenocarcinomas, 9.2% had Sigmoid Volvulus.

CONCLUSION: SAIO is more common in male. Most of the diagnosed cases had small gut obstruction due to adhesions in 44.5%.

KEYWORDS: Subacute intestinal obstruction, Adhesions, Exploratory Laparotomy

I. INTRODUCTION

Bowel obstruction is one of the most common abdominal presentations faced by a general surgeon in their day to day practice.(1) Intestinal obstruction of either small or large bowel is a major cause of mortality and morbidity due to its multiple etiology. Small bowel obstruction due to adhesions, constipations, malignancy and volvulus are more common. Large bowel obstruction is more commonly occurs due to colorectal malignancy and the lesion occurring at sigmoid or rectosigmoid region.(2) The treatment outcome has changed significantly due to early diagnosis of obstruction, skillful operative management & intensive post op follow ups.

OBJECTIVE OF THE STUDY

To observe the clinical presentation, etiology, type of management and short-term outcome of the patients of SAIO.

II. MATERIALS AND METHODS

This retrospective meta-analysis was performed in the Department of General Surgery, Hi-Tech Medical College and Hospital, Bhubaneswar, over a period of two years from Sept. 2018 till Sept. 2020. A total of 50 diagnosed cases of SAIO (36 males, 14 females) who were admitted during the study period, were analyzed for the clinical presentation, etiology, type of management and outcome. Patients were of 16 to 90 years with a mean age of 48 years.

INCLUSION CRITERIA

Patients above 15 years of age with symptom and



signs of subacute intestinal obstruction were included in this study group.

EXCLUSION CRITERIA

Patients of age less than 15 years, patients with acute strangulated obstructions and with complicated

Intestinal obstructions were excluded from this study group.

Detailed history & clinical examination of the patients were collected from our hospital

records. Ryle's tube and Foley's catheter were inserted in every patient provisionally diagnosed as SAIO. Intravenous fluids started immediately in view of patients being kept NPO. Routine investigations were done in all patients with emphasis on following Radiological investigations:

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- Straight X-Ray of abdomen in erect posture
- Ultrasonography of abdomen and pelvis
- CECT Abdomen & Pelvis

Etiology: -

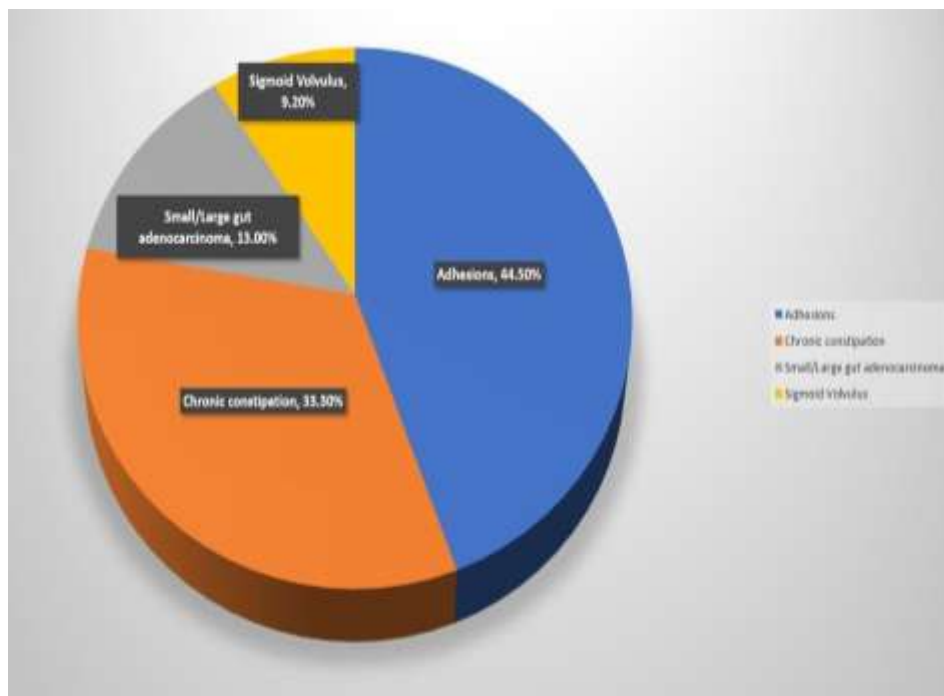


Fig. 1

III. RESULTS:

In this study it was found that majority of etiology for SAIO were due to adhesions (44.5%) followed by chronic constipation (d/t faecolith-33.3%), small/large gut adenocarcinoma (13%) and sigmoid volvulus (9.2%) being the least. [fig.1]

Radiological images: -

Fig 1a- XRAY ABDOMEN ERECT-showing bowel distention



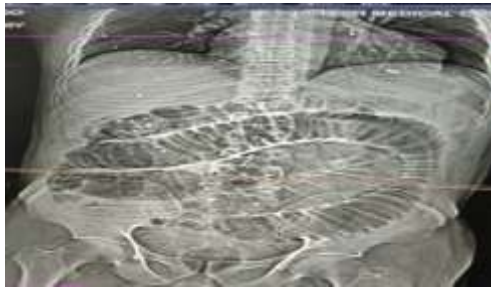


Fig 1b-CTSCAN ABDOMEN- Distended bowel loops in a case of SAIO

Symptom distribution of patients: - It was observed in the study that majority of symptoms were Abdominal distention (90%) [fig 1a,1b], followed by constipation (70%), vomiting (60%) and abdominal pain (40%). [fig. 2]

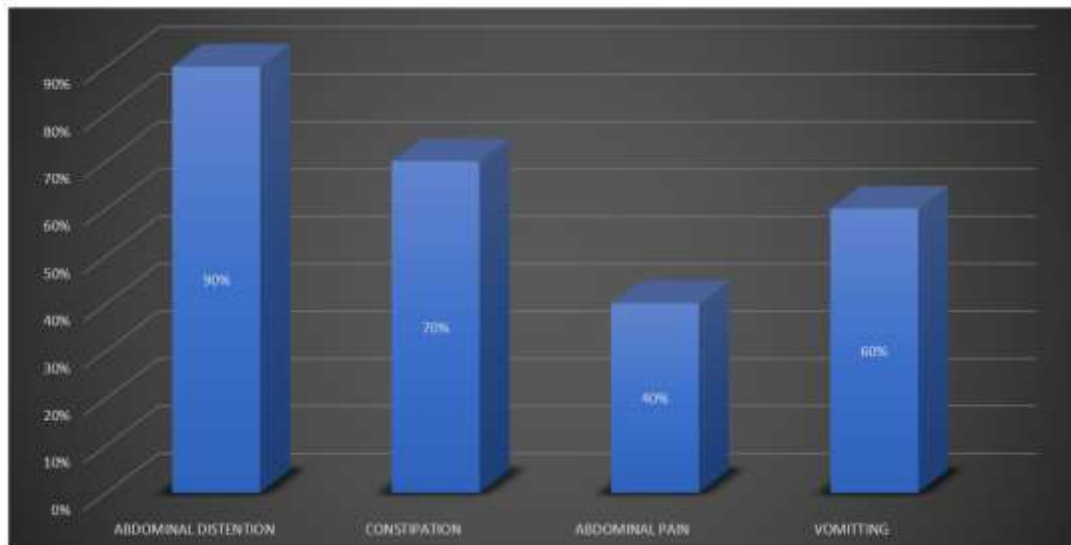


Fig 2

Duration of symptoms: - It was found from the database that majority patients having typical symptoms of SAIO presented to Surgery OPD, were having a duration of complaints less than 1

month (41%) followed by 31% cases between 1-3 months and 28% more than 3 months of duration. [fig.3]

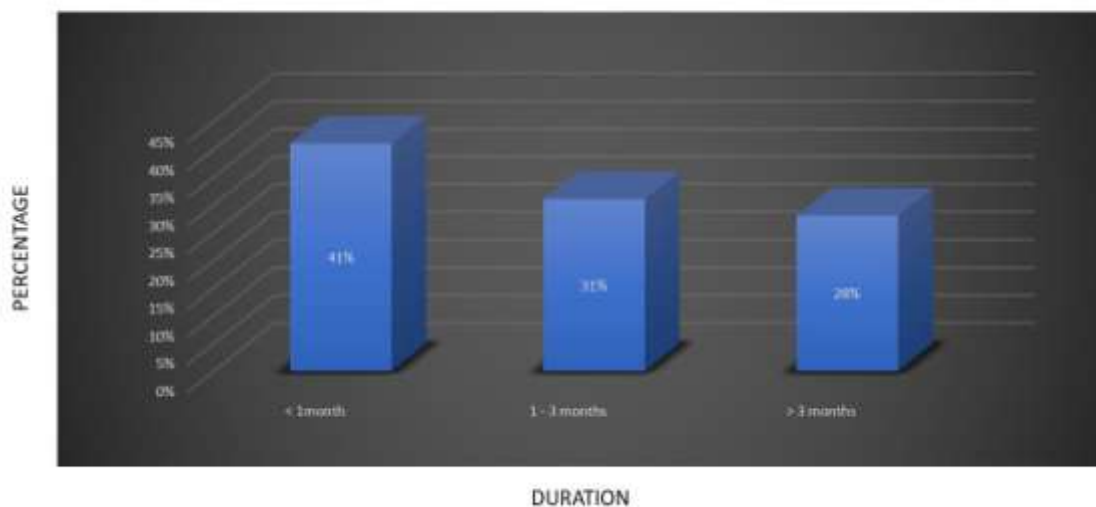


Fig 3



Table 1- History of previous abdominal surgeries in patients: -

Previous surgery	Number	Percentage (%)
YES	30	60
NO	20	40
TOTAL	50	100

MANAGEMENT:

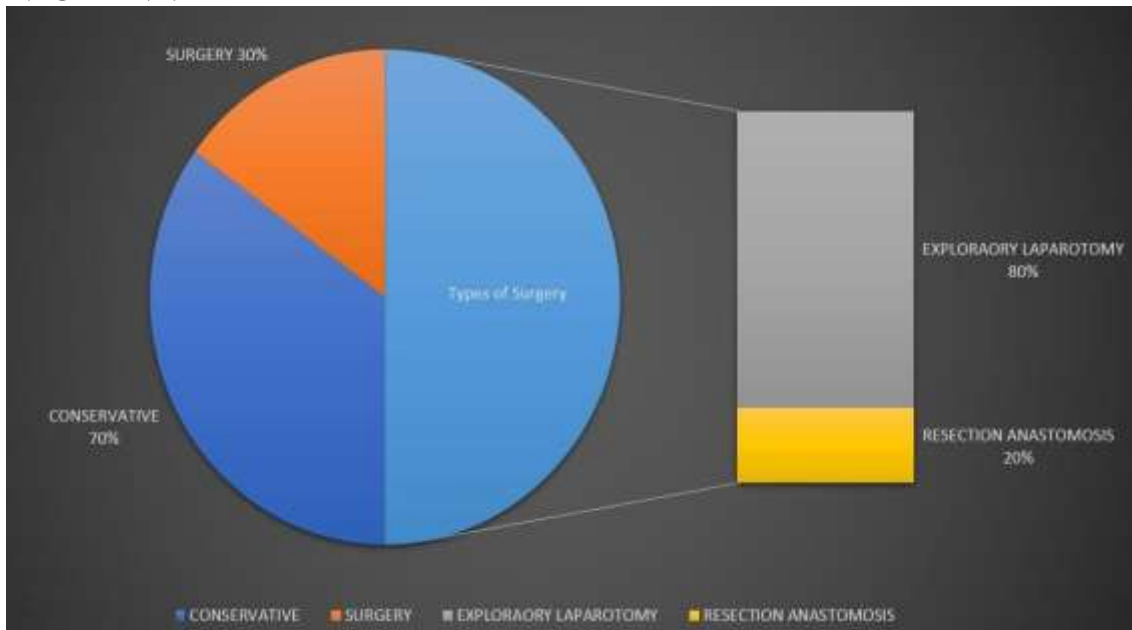


Fig.4

IV. DISCUSSION

This study included 50 patients. Among all the patients, there were 36 males and 14 females. SAIO was observed commonly in elderly patients with a mean age of 48 years. Most of the patients (60%) had a previous history of some kind of abdominal surgeries [table 1]. While comparing the etiology in present study [table2], it was

observed that Adhesion was the most common etiological factor, which was found similar with other studies also done by Jahangir et al(3), Deolekar SR et al.(4), and Raghvendra Sharma et al(5). However, in the study done by Souvik Adhikari et al.(6), Malignancy was found to be more common than adhesion.

Table 2- comparison of etiology with other studies: -

CAUSES	Souvik Adhikari et al.	Jahangir et al.	Deolekar SR et al.	Raghvendra sharma et al.	Present study
Adhesions	16%	41%	37.5%	45.2%	44.5%
Malignancy	17%	2%	10%	16.6%	13.0%
Volvulus	6%	4%	2.5%	10.2%	9.2%

In another instance of comparison in clinical features in SAIO [table3], it was observed that in most cases Abdominal distension was a

major complaint among patients, which was found to be similar with other studies done by Souvik Adhikar et al., Deolekar SR et al., and Jahangir-



Sarwar Khan et al. However, in the study done by Jahangir-Sarwar Khan et al. it was also found that in almost all cases of their study, Pain abdomen

was the chief complaint. Similarly, in another study done by Raghvendra Sharma et al. it was found that constipation is the predominant complaint.

Table 3- comparison of clinical features with other studies: -

Studies	Pain Abdomen	Vomiting	Abdominal distension	Constipation
Present study	40%	60%	90%	70%
Souvik Adhikari et al.	72%	91%	93%	82%
Jahangir- Sarwar Khan et al.	100%	92%	97%	97%
Deolekar SR et al.	85%	83.8%	80%	63.8%
Raghvendra sharma et al.	83.4%	64.3%	74.5%	97.5%

Hence on summarizing our study, it was found that the most common presentation in SAIO was abdominal distention followed by constipation, vomiting and abdominal pain(7,8). Majority cases (70%) were managed conservatively and 30% were managed surgically among which exploratory laparotomy with adhesiolysis [fig.4], being the most common surgical procedure followed by resection anastomosis.

V. CONCLUSION

Bowel obstruction continues to be one of the most common abdominal problems, irrespective of the cause, it remains a major cause of morbidity of the patient. Success in the treatment of intestinal obstruction depends largely upon early diagnosis and treating the pathological effects of the obstruction just as much as the cause itself.(9) The evaluation of patients with suspected bowel obstruction endeavors not only to confirm the diagnosis but also to determine the need and timing of surgery.

Funding: - No funding sources

Conflict of interest: - None declared

Ethical approval: - The study was approved by the Institutional Ethics Committee.

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