

ORIGINAL RESEARCH

A prospective study to assess the indications and timing of surgery for subacute intestinal obstruction to follow up the progress of patients and find out the outcome of management

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ABSTRACT

Introduction: A frequent surgical emergency is an acute intestinal blockage. Strictures, polyps, and tumors are frequent causes; gallstones and foreign bodies are less common. Small bowel Intestinal Obstruction (SBIOs) may affect the small or large intestines mechanically or functionally. Constipation, obstipation, distention, nausea, and stomach discomfort are all common symptoms of obstruction. The most frequent surgical condition of the small intestine is an intestinal blockage.

Aims And Objectives: To study the clinical profile and clinical features of patients presenting with subacute intestinal obstruction (SAIO), To study the role of investigations in diagnosis of SAIO, To find out the underlying cause of SAIO in patients under study, To study the predictors of relief of symptoms in patients with SAIO, To study the indications and timing for surgery for SAIO, To follow-up the progress of patients and find out the outcome of management. **Methods:** The work was conducted in L.L.R.M MEDICAL COLLEGE AND ASSOCIATED SVBP HOSPITAL, MEERUT. **Results:** This study consisted of 128 patients initially but then 8 of them either absconded or left the hospital against medical advice so the sample size of 120 (remaining) was taken into consideration. This study aids in the prediction of symptom relief in SAIO patients. Additionally, to investigate the need for SAIO surgery and its justification, as well as to keep track of patients progress and evaluate the effectiveness of treatment. Eight patients in total had history of previous surgery who had recurrences post management in our study of which Three patients were in the conservative therapy group and five patients in the surgical group. **Conclusion:** The present study revealed that subacute intestinal obstruction (SAIO) is seen more regularly in middle age group while no age is immune, with females more commonly afflicted than males. We discovered that abdominal discomfort was the most commonly reported symptom, while tenderness was the most frequently reported sign in these patients following patients in this study we can say surgery is preferred in SAIO patients who have previous history of surgery to stop recurrence. Despite the unusual presentation of this complex entity, the majority of SAIO patients were handled cautiously.

Key Words: Patients demographic, lymphadenopathy, ultrasonography

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INTRODUCTION

Subacute intestinal obstruction is a most frequent surgical problem now a days and commonest etiology are post-surgical adhesion, Strictures, polyps, tumors and gallstones, foreign bodies are less common¹. Subacute Intestinal Obstruction (SAIO) may affect the small or large intestines mechanically or functionally². Constipation, obstipation, distention, nausea, and stomach discomfort are all common symptoms of obstruction. Although the severity of these clinical

symptoms varies depending on the acuity and anatomic level of obstruction, the clinical presentation typically includes nausea, emesis, colicky abdominal pain, and cessation of flatus and stool passage. Extrinsic, intrinsic, or intraluminal causes make up a major portion of the possible causes of small and large bowel blockages.

In developed countries, extrinsic causes, most frequently post-surgical adhesions, are the main cause of SAIO³. At least two-thirds of people who have had

abdominal surgery in the past are thought to develop adhesions. Cancer is another major extrinsic cause, as it compresses the small intestine and produces blockage. Inguinal and umbilical hernias are two extrinsic sources that are less frequent but usual presentation. Subacute intestinal blockages occur at the same rate in both men and women. Prior abdominal surgery, colon or metastatic cancer, chronic intestinal inflammatory illness, an existing abdominal wall and/or an inguinal hernia, past irradiation, and foreign body ingestion are the most important variables influencing incidence and distribution.

SAIO suggests partial blockage. There are numerous different ways it has been defined, and the treatment guidelines contain several grey areas. It is distinguished by persistent flatulence and/or feces passage that lasts more than 6 to 12 hours following the beginning of symptoms including colicky stomach pain, vomiting, and abdominal distension. It is a perplexing word typically used to describe intermittent and recurring intestinal blockage. It might start out as an acute blockage and clear up on its own or with conservative treatment in a short period of time.

A complete blood count, metabolic panel, and serum lactate level should be included in the laboratory examination. Computed tomography or abdominal radiography imaging can help with therapy planning by helping to confirm the diagnosis. Nasogastric decompression, bowel rest, and intravenous fluid resuscitation with metabolic derangement correction are all used in the treatment of simple blockages⁴.

Antibiotics that are effective against both gram-negative and anaerobes should be given to patients who have a fever and leukocytosis. A surgical intervention is indicated when there is evidence of vascular compromise or perforation, or when the condition does not improve with appropriate nonoperative management.

Determining the clinical profile, underlying etiology, diagnosis, and clinical characteristics of patients who present with subacute intestinal obstruction (SAIO) is the goal of the current study. Additionally, this study contributes to the forecasting of symptom alleviation in SAIO patients, and to research the time and justification for SAIO surgery, as well as to monitor patients' development and ascertain the results of care in follow up.

AIMS AND OBJECTIVES

Following are the aims and objectives of the patients presenting with Sub acute intestinal obstruction (SAIO) on the basis of study:

To study the clinical profile and clinical features of patients presenting with subacute intestinal obstruction (SAIO).

To study the role of investigations in diagnosis of SAIO.

To find out the underlying cause of SAIO in patients under study.

To study the predictors of relief of symptoms in patients with SAIO.

To study the indications and timing for surgery for SAIO.

To follow-up the progress of patients and find out the outcome of management

MATERIALS AND METHODS

SOURCE OF DATA

The study was carried out in June 2021 to October 2022 on patients presenting with Sub-Acute Intestinal Obstruction (SAIO) at the surgical ward of the SVBP Hospital, LLRM Medical College, Meerut.

DATA COLLECTION

Patients age, the severity and duration of their symptoms, Past medical history, a thorough physical examination, laboratory and radiological tests, the type and length of the treatment, complications, recurrence and follow up.

INCLUSION CRITERION

All patients presenting to surgery Out Patient Department or in Emergency with the following features of Sub-Acute Intestinal Obstruction (SAIO) were included in the study:

Patients who continue to pass feces/flatus beyond 12 hours of onset of symptoms.

Lesser degree of abdominal distention.

Plain X-ray of abdomen showing gas distended bowel loops/multiple air fluid levels.

Decision for non-operative treatment was made on the first instance following clinical and radiological evaluation.

EXCLUSION CRITERION

Patients presenting with acute intestinal obstruction, in whom operative treatment was decided on first instance following clinical and radiological evaluation.

Patients presenting with signs of bowel strangulation.

Patients unwilling to enrol in the study.

METHOD OF COLLECTION OF DATA

Study type: Prospective study

Sample Size 120 patients with features of Sub-Acute Intestinal Obstruction (SAIO)

RESULTS& DISCUSSION

This study consisted of 128 patients initially but then 8 of them either absconded or left the hospital against medical advice so the sample size of 120 (remaining) was taken into consideration. This study aids in the prediction of symptom relief in SAIO patients. Additionally, to investigate the need for SAIO surgery and its justification, as well as to keep track of patients progress and evaluate the effectiveness of treatment. The following are the results of patients demographic profile and clinical assessment with underlying aetiology, diagnosis of individuals who present with subacute intestinal obstruction (SAIO).

ABDOMINAL FINDINGS

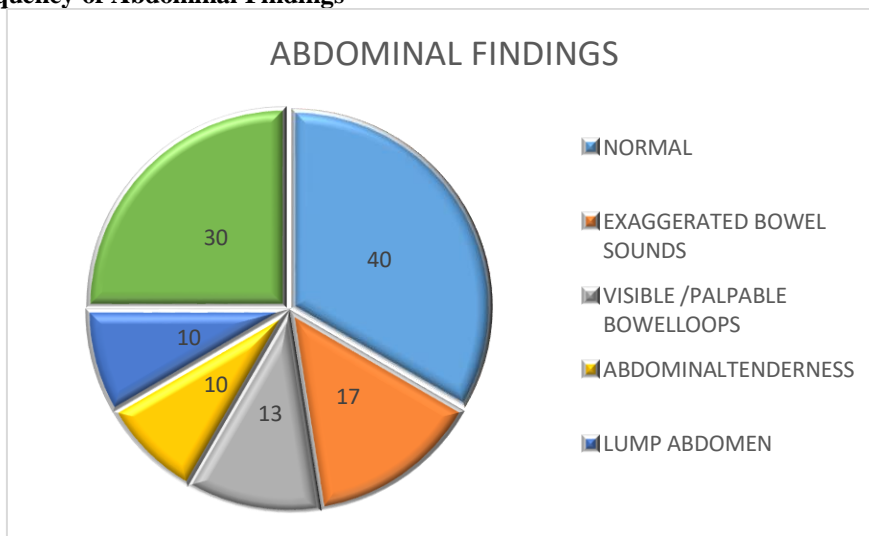
About 61 patients were normal after an abdominal examination. On auscultation, seventeen of the patient reported accentuated bowel sounds. Thirteen patients

exhibited palpable bowel loops, ten had abdominal discomfort, ten more had abdominal lumps and the remaining nine had distension of the abdomen⁵.

Table 1: Frequency of Abdominal Findings

Abdominal findings	No of patients	Percentage (%)
Normal	61	50.80
Exaggerated bowel sounds	17	14.17
Visible /palpable bowelloops	13	10.83
Abdominaltenderness	10	8.33
Lump abdomen	10	8.33
Distension of abdomen	11	9.2
Total	120	100

Graph 1: Frequency of Abdominal Findings



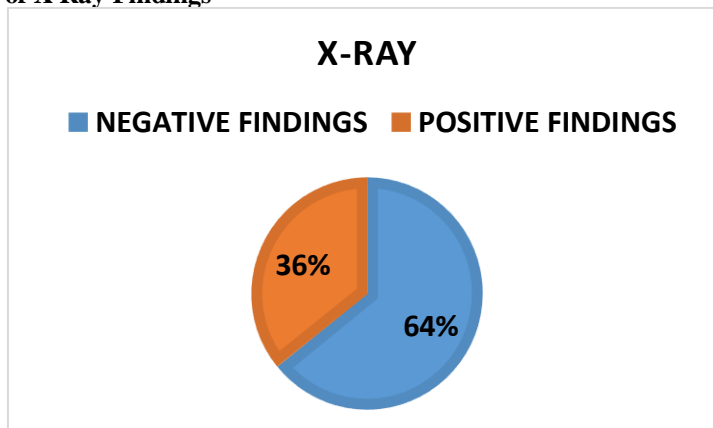
X-RAY FINDINGS

On X-ray investigation 77 patients had negative findings and 43 patients had positive findings like dilated bowel loops, few air fluid level etc. similar findings were found by Anderson et al⁶.

Table 2: Frequency of X-Ray Findings

X Ray	No Of Patients	Percentage (%)
Negative Findings	77	64.67
Positive Findings	43	35.33
Total	120	100

Graph 2: Frequency of X Ray Findings



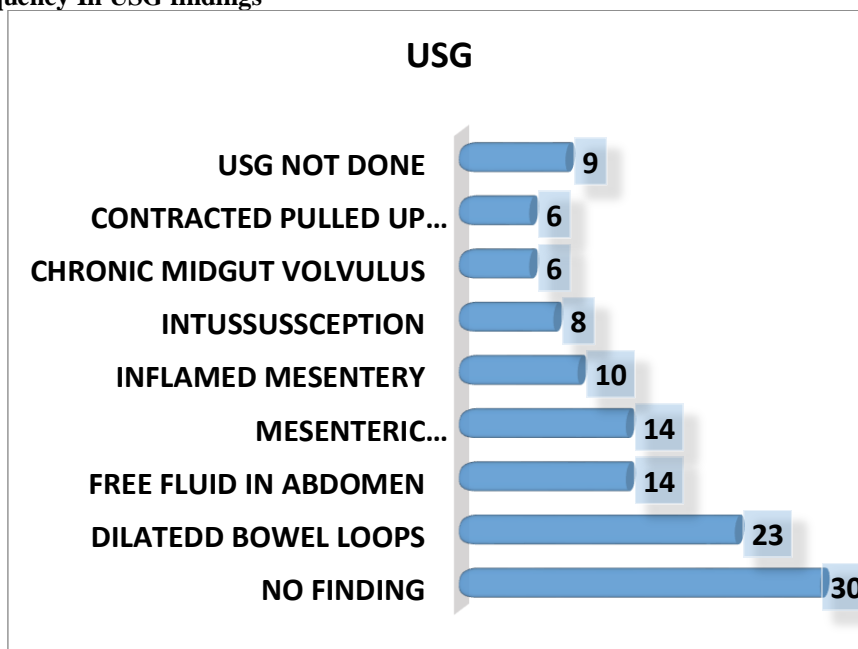
USG FINDINGS

In 30 of individuals had normal USG findings, 23 patients had with dilated bowel loops on USG. In 14 patients' abdomen contained free fluid. 14 patients exhibited mesenteric lymphadenopathy, and 10 of them developed inflamed mesentery. Eight patients had intussusceptions. A total of 9 participants have not undergone ultrasonography, 6 patients have chronic midgut volvulus, of patients have pulled up caecums. These USG finding were supported by Anderson et al⁶.

Table 3: Frequency In USG Findings

USG	No Of Patients	Percentage (%)
No Finding	30	25
Dilated Bowel Loops	23	19.17
Free Fluid In Abdomen	14	11.67
Mesenteric Lymphadenopathy	14	11.67
Inflamed Mesentery	10	8.33
Intussusception	8	6.67
Chronic Midgut Volvulus	6	5
Contracted Pulled Up Caecum	6	5
USG Not Done	9	7.5
Total	120	100

Group 3: Frequency In USG findings



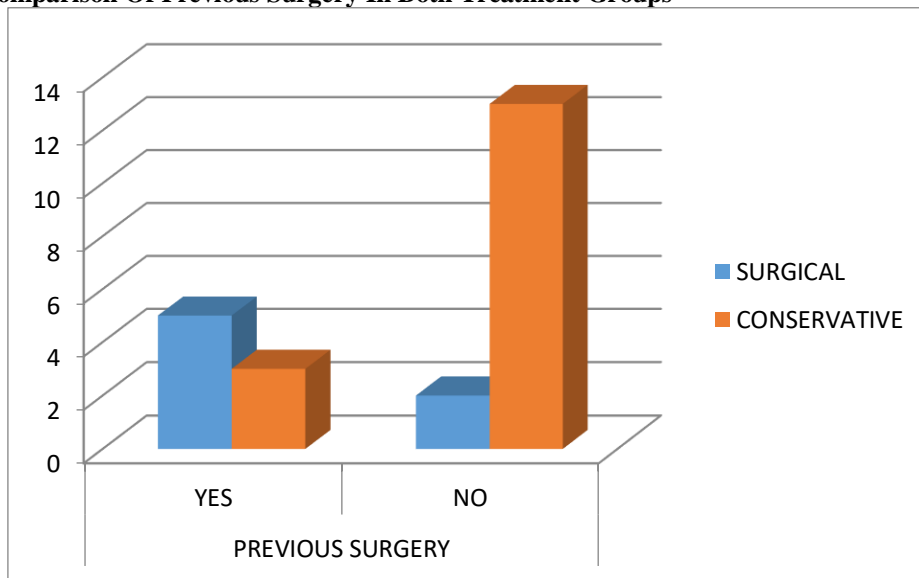
PREVIOUS SURGERY AND TREATMENT

Previous surgery were observed in both the treatment group. 5 patients from surgical group and 3 patients from conservative treatment group had history of previous surgery. These reports were compared using sample t test and p value showed 0.015 which is found to be significant. These findings were supported by Krishnamurthy G et al and Bohnem M et al.

Table 4: Relation Of Previous Surgery In Both Treatment Groups

Treatment	Previous Surgery		Total	P-Value
	Yes	No		
Surgical	5 (63%)	2 (13%)	7 (30%)	0.015
Conservative	3 (38%)	13 (87%)	16 (70%)	
Total	8 (100%)	15 (100%)	23 (100%)	

Graph 4: Comparison Of Previous Surgery In Both Treatment Groups



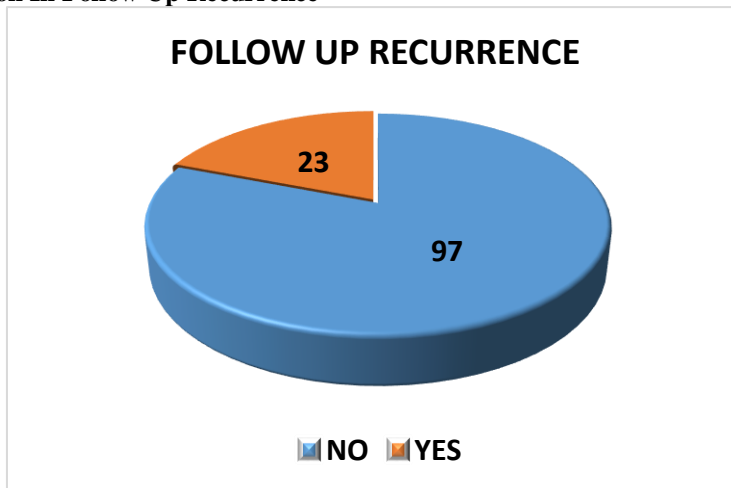
FOLLOW UP RECURRENCE

About 23 patients had recurrence during follow up. Similar findings were present in Anderson et al⁶, Krishnamurthy G et al⁷ and Bohner et al⁸.

Table 5: Distribution In Follow Up Recurrence

Follow Up Recurrence	No Of Patients	Percentage (%)
No	97	80.83
Yes	23	19.17
Total	120	100

Graph 5: Distribution In Follow Up Recurrence



CONCLUSION

The present study revealed that subacute intestinal obstruction (SAIO) is seen more regularly in middle age group while no age is immune, with females more commonly afflicted than males. We discovered that abdominal discomfort was the most commonly reported symptom, while tenderness was the most frequently reported sign in these patients. Despite the unusual presentation of this complex entity, the majority of SAIO patients were handled cautiously. The findings of the physical examination, clinical parameters, biopsy report, USG, x-ray, and follow-

uprecurrences were compared using a sample t-test. Among all the parameters difference in USG finding between the two groups were significant with a p value of (0.001).

Eight patients in total had history of previous surgery who had recurrences post management in our study of which Three patients were in the conservative therapy group and five patients in the surgical group. These reports were compared using a sample t- test, and found to be significant (p value = 0.015) . As a result, surgery is preferred in SAIO patients who have previous history of surgery to stop recurrence.

CONFLICT OF INTEREST

None Source Of

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Self

ETHICAL COMMITTEE CLEARANCE

Taken

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