



## ACUTE ABDOMEN RESULTING FROM THROMBOSIS OF SUPERIOR MESENTRIC ARTERY

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**ABSTRACT** Superior mesenteric artery syndrome is a rare cause of proximal small bowel obstruction and is linked to significant morbidity and mortality when the diagnosis is delayed. Despite the rarity of this condition, the morbidity and mortality associated with its complications make it a crucial differential to consider when there is a concern for bowel obstruction, especially in the setting of recent weight loss. Conservative management for SMA syndrome often fails, and laparoscopic duodeno-jejunostomy proves to be safe and effective as optimal definitive treatment

**KEYWORDS :** Superior Mesenteric Artery Syndrome, Emergency Laparotomy, Prognosis, Risk Factor, Laparoscopy

### INTRODUCTION

SMA syndrome is considered extremely uncommon and most consider this as a diagnosis of exclusion i.e., many other more common diagnoses must be ruled out. Sometimes the symptoms are mild and build slowly over time. Without treatment, in some people, symptoms can be severely disabling. Generally, the initial symptoms are nonspecific, which means that symptoms are common ones that can be associated with many different conditions. Sometimes symptoms can come and go (intermittent).

Symptoms can include nausea, vomiting, abdominal pain, indigestion (dyspepsia) and early satiety, in which the person feels full despite having very little food or drink because the stomach is not emptying. The stomach remains full of fluid or food previously ingested hours before. Constipation can occur when there is delay in stomach emptying. Vomiting of undigested food can occur and can become bilious i.e., green or yellow when the blockage becomes severe. Relief can be obtained by lying on the right decubitus or left decubitus (right or left side down) or face down (prone) with both arms and legs up (knee to chest position) after eating or drinking to allow the stomach to empty better. The abdominal pain can be severe after intake of food or drink because the pulsation of the SMA becomes stronger and bounding against the duodenum. Food aversion or food fear follows which aggravates the weight loss and worsens SMA syndrome.

Some affected individuals may also have nutcracker syndrome in which the left renal vein (kidney vein) is compressed by the AA and SMA. Most people affected have no symptoms but those affected will have left flank and pelvic pain and may have blood in the urine (hematuria)

### CASE STUDY

Retrospective study was conducted at the department of surgery, King George hospital, Visakhapatnam. A total of 6 patients were studied on the basis of history, physical examination and relevant investigations to confirm the diagnosis for which emergency laparotomy was done and followed up till 6 months post operatively for post operative adverse outcomes.

### MATERIALS & METHODS

- All 6 patients were clinically examined for superior mesenteric artery thrombosis.
- Diagnosis was confirmed with CT angiography, All the patients underwent exploratory laparotomy.
- Demographic information collected included sex, age at time of initial diagnosis, height and weight. The
- Weight status of each patient was estimated by calculation of the body mass index (BMI), pre-operative laboratory values analyzed.
- Both main and associated symptoms were recorded. Presenting symptoms were analyzed according to the duration before diagnosis.
- Possible predisposing factors for SMAT, presence of multiple comorbidities, and surgical history for each case were explored.

### Statistical Analysis:

Statistical analysis was performed using SPSS (version 14.0) continuous data are represented as mean +/- standard deviation.

The association between CLT and prognostic variables was done using chi square test.

The Kaplan meyer method with a log rank was used to account for recurrence and disease free rates during follow period.

P value was of statistical significance when it was <0.05.

### RESULTS:

All the 6 patients had features of varying degree of involvement of small bowel and all 6 patients had abdominal signs. All the patients needed open exploration.

Bowel was resected and anastomosis was done in 4 patients, bowel resection followed by stoma in 2 patients. 2 Patients have died and the rest 4 Patients were followed up for any further complications over a period of 1 year.

The mean age of the patients – 35 (Range : 22 to 64)

Out of 6, 4 were men and 2 were women.

### DISCUSSION:

Acute mesenteric ischemia is a rare abdominal emergency that usually requires wide intestinal resection and carries a high mortality rate with the adverse effects of short-bowel syndrome in the surviving patients. A critical point that influences the survival rate is prompt diagnosis in patients with AMI. Numerous surgical reports indicated that acute intestinal ischemia is associated with a poor prognosis.

The absence of specific clinical presentation and nonspecific laboratory tests are among the causes of the delay in the diagnosis. Other examinations that can be helpful in the diagnostic process are angiography, computed tomography angiography (CTA), and magnetic resonance angiography (MRA)

When no clinical evidence is found for an immediate surgical intervention, such as peritonitis or gastrointestinal hemorrhage, angiography could be considered the treatment of choice in patients with suspected AMI, because this investigation allows us to distinguish between nonthrombotic and thrombotic causes. Moreover, angiography allows us to treat the occlusion with a restoration of the blood flow by using an endovascular approach, such as percutaneous transluminal angioplasty and thrombolysis.

The second-look laparotomy remains the gold standard for the assessment of further bowel viability, and, at the same time, it is the only way to remove infarcted tracts of the bowel. During the surgical procedure, the bowel viability can be assessed by the physical examination (inspection of bowel and palpation of the vessel) or by ultrasound examination and intravenous fluorescein.

Although the second-look laparotomy is the gold standard for the treatment of AMI, some authors perform a second-look laparoscopy to decrease the severe anesthesiologic and surgical trauma in these critically ill patients.

### CONCLUSION

Acute mesenteric ischaemia is an abdominal emergency both if physical signs are present or absent. Angiography is diagnostic as well as therapeutic. Exploratory laparotomy is required if peritoneal signs are present. Still prognosis is poor and mortality is as high as 70%.

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