

WHEN THE BLOOD BECOMES THE BARRIER : A RARE CASE OF SMA SYNDROME

Ahmad Ashraf bin Ghani ^[1] Muhammad Hafizulah bin Ramli ^[1] Haniif bin A Mazian ^[1,2]

^[1] Department of Surgery, Hospital Sultan Zainal Abidin (HoSZA), Kuala Terengganu

^[2] Faculty of Medicine, Universiti Sultan Zainal Abidin (UniSZA) Kuala Terengganu

Introduction

Superior Mesenteric Artery Syndrome (SMAS) is a rare gastrointestinal disorder characterized by the compression of the third part of the duodenum between the abdominal aorta and the superior mesenteric artery. Weight loss, postprandial vomiting, and abdominal pain are some of the symptoms brought on by this compression. Diagnosis involves clinical evaluation and a series of imaging like plain Computed Tomography (CT) Scans or CT Angiography. Conservative methods of initial management include dietary assistance and lifestyle adjustments. If conservative measures prove ineffective, surgical procedures like duodenojejunostomy may be taken into consideration. Despite its rarity, awareness of SMAS is essential among healthcare professionals to facilitate prompt recognition and effective management of this challenging condition.

Case Presentation

A 27-year-old female presented with symptoms of abdominal pain, postprandial vomiting, loose stool, and abdominal distension for a week. The esophagogastroduodenoscopy done was normal despite of the symptoms. The patient was treated for gastritis and discharged the next day. The patient came back with the same symptoms but was dehydrated with severe lactic acidosis. After adequate fluid resuscitation, nutritional support, and medications, Computed Tomography (CT) Scan was arranged and showed abrupt tapering of the duodenum at the D2 level. After proper optimization, this patient underwent jejuno-jejunostomy under emergency setting. Post operatively, patient's conditions improving and was safely discharged after 3 weeks of hospitalization. During follow up, patient's gaining weight and in good health condition.



Figure 1 : Axial View of CT Abdomen



Figure 2 : Sagittal View of CT Abdomen

Conclusion

SMA Syndrome is rare but can lead to severe condition that requires careful and individualized management. The initial approach often involves conservative managements such as nutritional support, positional change and prokinetic agents to relieve the symptoms and improve nutritional status ^[1]. When conservative management fails or the symptoms become more severe, the surgical management takes places. Either minimally invasive surgery or open surgery approach are used to treat the condition. The procedure such as gastroduodenostomy or jejunostomy are being used depends on the locations of the compression.

Successful management of SMA Syndrome requires a multidisciplinary approach, including gastroenterologists, surgeons, and dietitians to address the physical and emotional aspects of the condition. Regular monitoring and follow-up are essential to ensure the patient's recovery and long-term well-being. With appropriate treatment, most patients can achieve significant symptom relief and an improved quality of life ^[2].

REFERENCES

- Merrett, N. D., Wilson, R. B., Cosman, P., & Biankin, A. V. (2008). Superior Mesenteric Artery Syndrome: Diagnosis and Treatment Strategies. *Journal of Gastrointestinal Surgery*, 13(2), 287–292. <https://doi.org/10.1007/s11605-008-0695-4>
- Singh, S., & Contrucci, A. L. (2023). Superior mesenteric artery syndrome and anorexia nervosa: a case report. *Journal of Medical Case Reports*, 17(1). <https://doi.org/10.1186/s13256-023-04168-6>
- Sinagra, E., Raimondo, D., Albano, D., Guarnotta, V., Blasco, M., Testai, S., Marasà, M., Mastrella, V., Alaimo, V., Bova, V., Albano, G., Sorrentino, D., Tomasello, G., Cappello, F., Leone, A., Rossi, F., Galia, M., Lagalla, R., Midiri, (2018b). Superior Mesenteric Artery Syndrome: Clinical, Endoscopic, and Radiological Findings. *Gastroenterology Research and Practice*, 2018, 1–7. <https://doi.org/10.1155/2018/1937416>