E-ISSN: 2708-1508
P-ISSN: 2708-1494
IJCRS 2021; 3(1): 10-11
www.casereportsofsurgery.com
Received: 17-11-2020
Accepted: 18-12-2020

Dr. Sushil Deshmukh
Consultant Department of Surgery Maeer's Vishwa Raj Hospital, Pune, Maharashtra, India

Dr. Aniket Zarkar
H.O.D, Department of Surgery Maeer's VishwaRaj Hospital, Pune, Maharashtra, India

Corresponding Author:
Dr. Sushil Deshmukh
Consultant Department of Surgery Maeer's Vishwa Raj Hospital, Pune, Maharashtra, India

A rare condition: Duodeno-Jejunostomy surgery of a 19-year-old female

Dr. Sushil Deshmukh and Dr. Aniket Zarkar

Abstract
Wilkie syndrome and superior mesenteric artery syndrome (SMA syndrome) are other names for vascular compression of the duodenum. It is a rare disorder in which the third section of the duodenum is compressed by the SMA as it passes over it. Typically, duodenojejunostomy is regarded as the preferred course of treatment. Occasionally, patients fail this medical management and require a surgical bypass. We present the case of a 19-year-old female who presented with SMA syndrome and underwent Duodenojejunostomy Surgery.

Keywords: Duodeno-Jejunostomy surgery, superior mesenteric artery, gastrojejunostomy

Introduction
Superior mesenteric artery (SMA) syndrome is a rare form of small bowel obstruction with an incidence ranging from 0.01% to 0.3%. The condition results from an abnormally narrow angle between the SMA and the aorta causing compression of the third portion of the duodenum between these two vessels. This narrow aorto-mesenteric angle has been associated with a history of rapid vertical growth, corrective spinal surgery, or sudden weight loss incited by several possible comorbid conditions. First-line treatment is typically non-operative and consists of nutritional optimization with tube feeds distal to the site of obstruction. With appropriate weight gain, the acute angle between the SMA and aorta can often be corrected. Surgical intervention is indicated in cases of failed medical treatment. Options for surgical treatment include mobilization of the duodenum away from the SMA (Strong procedure) or bypass (gastrojejunostomy or duodenojejunostomy).

Case history
A 19-year-old female, presented to the Surgery Department with complaints of persistent vomiting, inability to eat, and significant weight loss over the past few months. She had no significant medical history and did not report any recent trauma or abdominal surgeries. Upon further evaluation, it was noted that her symptoms had been progressively worsening, and she had lost appetite and weight in the past three months. Multiple tests were conducted, including blood investigations, endoscopy, barium study, CT scan, and MRI, to rule out other possible causes of the patient's symptoms, such as gastrointestinal obstruction, gastroparesis, or malignancy: The patient was diagnosed with Superior Mesenteric Artery (SMA) Syndrome. Superior Mesenteric Artery (SMA) Syndrome happens to 0.1%-0.3% of the population. Superior mesenteric artery (SMA) syndrome is an uncommon but well-recognized clinical entity characterized by compression of the third, or transverse, portion of the duodenum between the aorta and the superior mesenteric artery. This results in chronic, intermittent, or acute complete or partial duodenal obstruction; this causes repeated vomiting. The patient is not able to eat food. Repeated vomiting can lead to loss of weight further aggravating the condition. If not treated it can lead to serious complications such as dehydration, malnutrition, and electrolyte imbalances. The main line of treatment is surgery and advanced laparoscopic surgery is the preferred approach; following which the patient was posted for OT. During the surgery, the duodenum and jejunum, which are parts of the small intestine, are connected to bypass the blockage caused by the compressed blood vessels. This allows the food to bypass obstruction through the digestive tract and alleviates the symptoms. The surgery was successfully carried out and the patient had excellent relief. Early diagnosis and prompt surgical intervention are crucial for successful management.

Discussion
Superior mesenteric artery syndrome was first identified in the mid-19th century and many surgical approaches to treatment have been described [5].

While most often reported in adults, the goals of treatment in children are similar [6]. Medical therapy is typically the first line of treatment and focuses on enlarging the narrow aorto-mesenteric angle via nutritional optimization. This can be achieved with distal feeding tube placement, parenteral nutrition, pro-motility agents, anti-reflux prophylaxis, and postprandial left lateral decubitus positioning. Failure of medical therapy is an indication of surgical treatment [8]. Several surgical approaches to SMA syndrome have been described and focus on mobilizing the duodenum out of the acute aorto-mesenteric window or bypassing the obstruction altogether. Options for surgical bypass in SMA syndrome include a gastrojejunostomy or duodenojejunostomy. A gastrojejunostomy and side-to-side duodenojejunostomy at the second portion of the duodenum both allow enteric contents to bypass the obstructed portions of the duodenum. However, the obstructed duodenal segment distal to the bypass may function like a diverticulum and house static enteral contents. A recent case described a duodenojejunostomy performed at the third portion of the duodenum.

Conclusion

In conclusion, with Superior mesenteric artery syndrome, duodenojejunostomy performed at the third portion of the duodenum can be done safely. Furthermore, this technique offers the benefits of a minimally invasive approach. The main line of treatment is surgery and advanced laparoscopic surgery is the preferred approach: The surgery was successfully carried out and the patient had excellent relief. Early diagnosis and prompt surgical intervention are crucial for successful management.

Conflict of Interest

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

Funding Source

There is no funding source for this study

Acknowledgement

Most sincerely convey our deep sense of gratitude to my colleagues for their remarkable guidance and academic support during this study. At last, we are grateful for the support and help we got throughout the research study from participants who contribute to accomplishing the research study successfully.

References

1. Jo JB, Song KY, Park CH. Laparoscopic duodenojejunostomy for superior mesenteric artery syndrome: Report of a case. Surg Laparosc Endosc Percutan Tech. 2008 Apr;18(2):213-5.
2. James M. Prieto, Laparoscopic duodenojejunostomy for superior mesenteric artery syndrome in a 13-year-old boy. Journal of Pediatric Surgery Case Reports https://doi.org/10.1016/j.epsc.2021.101866
3. Ehlers TO, Tsamalaidze L, Pereira L, Stauffer J. Laparoscopic Duodenojejunostomy for the SMA Syndrome. Zentralbl Chir. 2018 Oct;143(5):461-463. English.
4. J Gen Intern Med.Superior Mesenteric Artery (Wilkie's) Syndrome as a Result of Cardiac Cachexia J Gen Intern Med. 2005 Oct; 20(10):C3-C4. PMCID: PMC1490234. PMID: 16191148. DOI: 10.1111/j.1525-1497.2005.0201.x
5. Ranschaert E, Alhusseiny K, Kokunin A, *et al*. Superior mesenteric artery syndrome. Reference article, Radiopaedia.org (Accessed on 20 Jul 2023). DOI: https://doi.org/10.53347/rID-11142