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A Case Report

SUPERIOR MESENTERIC ARTERY SYNDROME/ WILKIE SYNDROME –A CASE REPORT

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Abstract:

Wilkie's syndrome is an uncommon condition resulting from the superior mesenteric artery (SMA) at its origin exerting extrinsic compression on the duodenum's third segment. The non-specific and fluctuating symptoms include postprandial symptoms include weight loss, anorexia, early satiety, nausea, vomiting, and stomach pain.

Objectives: To aware diagnose and manage a rare case of Wilkie's Syndrome

Methodology: We brought in a female patient, 29 years old who previously experienced bilious vomiting, nausea, and cramping and pain in her abdomen. She had experienced a similar ailment for the previous year. Initial results from UGD scanning reveal a duodenal air bubble. Duodenoscopy, which display the third and fourth segments of the duodenum dilated. UGD scanning reveal a duodenal air bubble.

Duodenoscopy, which displays the third and fourth segments of duodenum dilated.

No evidence of a lesion in the first or second portion of duodenum is seen on an upper GI scopy. Stomach was found to be normal, ruling out GERD. Following a laparoscopic (roux en y) Duodenojejunostomy, the patient's intraoperative results were in line with the diagnosis. There were no complications during the surgery or the recovery period, and the patient was released on the sixth day following surgery. **Conclusion:** Wilkie's Syndrome is an uncommon illness. There have only been 500 cases worldwide to date. In long-term instances, surgery is the preferred course of treatment because non-surgical methods run the risk of deadly consequences such as severe malnourishment, imbalanced electrolytes, gastric rupture, spontaneous upper gastrointestinal bleeding, or abrupt cardiac collapse.

Keywords: Wilkie's syndrome, post-prandial abdominal pain, Roux en Y duodenojejunostomy, intestinal obstruction, superior mesenteric artery syndrome

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INTRODUCTION:

Wilkie's Syndrome is a rare cause of small bowel obstruction, characterized by an extrinsic vascular compression of the third portion of the duodenum between the abdominal aorta and overlying superior mesenteric artery, due to loss of cushion of fat. Clinically, it presents with postprandial abdominal distension, pain, nausea, vomiting, and weight loss. Fasting, total parenteral nutrition, and gastric decompression constitute usual conservative treatment with a high success rate. Surgery if needed has a low failure rate and consists of creating a gastrojejunostomy or duodenojejunostomy with or without duodenal mobilization (known as the Strong's procedure).

CASE REPORT:

A 29 year old female patient was admitted in Government erode medical college and hospital, Perundurai, Tamil Nadu with c/o abdominal pain and cramp, c/o nausea, c/o bilious vomiting, non-projectile containing eaten food particles. Her past medical and medication history include similar illness in the past, sometimes severe from past 1 year. H/o weight loss present in past 1 year (68kg to 47 kg). H/O Fever (100.2^o)

FAMILY HISTORY H/o GERD in father from past 2 years

PERSONAL HISTORY:

Consumes mixed diet, feeling that bowel has not emptied completely after passing stools

GENERAL PHYSICAL EXAMINATION:

Patient was conscious, oriented, and febrile. Vitals was found to lie within normal range. Built -Weight -47 kg, Height -152cm BMI -20.3 (patient was found to be underweight)
P⁺T⁰C⁰C⁰L⁰E⁰

SYSTEMIC EXAMINATION:

Abdomen – On inspection - Scaphoid in shape.
On palpation – Soft, not distended, no guarding, rigidity, no tenderness, no palpable lump.
On percussion – Tympanic note.
On Auscultation – Normal bowel sounds present.

INVESTIGATION:

WBC range was found to be elevated (23.7* 10⁹), serum amylase was also elevated 170 U/L. Other lab parameters was found to be in normal range.

OTHER INVESTIGATIONAL TESTS:

USG abdomen and pelvis show air bubbles in duodenum.

Upper duodenoscopy show dilation of 3rd and 4th portion of duodenum.

Upper GI scopy show normal stomach, no evidence of defect in 1st and 2nd portion of duodenum, show transient hold up of barium t level of superior mesenteric artery

CT scan report show narrowed duodenum

TREATMENT Preoperative treatment: Liquid and BRAT diet, Inj Emeset, Inj Para, Inj Rani, Inj Diclo, and Inj Taxim.

Operative management include Roux En Y duodenojejunostomy was performed on 10th day of admission

Postoperative treatment include T.Metoclopramide 10mg and Syp antacid 30 ml 3 times a day

OUTCOME Patient was discharged on 4th postoperative day with mild vomiting and prescribed with T.Ondansetron 8mg

DISCUSSION:

Wilkie's Syndrome is a rare, life-threatening gastrovascular condition in which the abdominal aorta (AA) and the overlying superior mesenteric artery compress the third part of the duodenum. The syndrome is often caused by a 6^o-25^o angle between the AA and the SMA, as opposed to the normal range of 38^o-56^o, due to a lack of retroperitoneal and visceral fat. Furthermore, the aortomesenteric distance is 2-8 millimeters, as opposed to the standard 10-20¹.

In this case report patient USG abdomen and pelvis show air bubbles in duodenum, Upper duodenoscopy show dilation of 3rd and 4th portion of duodenum, Upper GI scopy show normal stomach, no evidence of defect in 1st and 2nd portion of duodenum, show transient hold up of barium t level of superior mesenteric artery, CT scan report show narrowed duodenum

Clinical features of Wilkie's syndrome are entirely vague and non-specific. The most prominent symptoms are post-prandial abdominal pain (59%), nausea (40%), vomiting (50%), early satiety (32%), and anorexia (18%). These symptoms are aggravated by lying supine after eating and are relieved by assuming the left lateral decubitus, prone or knee-chest position. These symptoms are compatible with more common conditions such as peptic ulcer disease, biliary colic, pancreatitis, and mesenteric ischemia².

In this case report patient c/o abdominal pain and cramp, c/o nausea, c/o bilious vomiting, non-projectile containing eaten food particles

SMA syndrome can present in acute, acquired form (e.g. abruptly emerging within an inpatient stay following scoliosis surgery) as well as chronic form (i.e. developing throughout the course of a lifetime and advancing due to environmental triggers, life changes, or other illnesses). Acute cases usually respond to medical management, while chronic cases require surgical intervention³.

The surgical operations proposed for treatment include: Strong's procedure, gastrojejunostomy and duodenojejunostomy. Although Strong's procedure maintains the integrity of the gastrointestinal tract, it has a 25% failure rate. Although gastrojejunostomy permits gastric decompression, it does not relieve duodenal compression, so that digestive symptoms may persist and lead to the appearance of blind loop syndrome or recurring peptic ulcers. Duodenojejunostomy is the procedure of choice, with a success rate higher than 90%. Gastroparesis often occurs after surgical correction, in connection with gastric and duodenal flaccidity⁴.

In this case report operative management include Roux En Y duodenojejunostomy was performed. Roux-en-Y duodenojejunostomy should be considered as an alternative procedure when duodenal obstruction occurs beyond second part of duodenum. This procedure is a type of surgical connection between the duodenum (the first part of the small intestine) and the jejunum (the second part of the small intestine) using a Roux-en-Y anastomosis. Anastomosis is a procedure which involves creating a connection between the duodenum and the jejunum. The surgeon typically creates a Y-shaped configuration where one limb connects the duodenum and the other limb connects the jejunum.

CONCLUSION:

We believe the underdiagnosed of SMA syndrome. It is crucial to have a high level of clinical suspicion, particularly in individuals who are experiencing significant weight loss and stomach distension symptoms. It is also important to take surgical stress into account as a potential SMA syndrome trigger. In this frequently underappreciated illness, interdisciplinary collaboration yields the best diagnostic and treatment outcomes. Finally, we want to draw attention to how challenging it can be to make an accurate diagnosis of SMA syndrome in a unique clinical context like the one we experienced. It is recommended to have heightened awareness in order to identify problems early and spare the patient needless misery⁵.

REFERENCE:

- 1 Merrett, N. D., Wilson, R. B., & Cosman, P. (2009). Bianchi's syndrome: 13 cases of superior mesenteric artery (SMA) syndrome successfully managed conservatively. *Journal of Surgical Research*, 156(2), 312-318. doi:10.1016/j.jss.2009.03.062
- 2 Welsch, T., Büchler, M. W., Kienle, P. (2007). Recalling superior mesenteric artery syndrome. *Digestive Surgery*, 24(3), 149-156. doi: 10.1159/000102097
- 3 Lippl F, Hannig C, Weiss W, Allescher HD, Classen M, Kurjak M: Superior mesenteric artery syndrome: diagnosis and treatment from the gastroenterologist's view. *J Gastroenterol* 2002;37:640-3
- 4 M.I. Aslam, J.G. Finch. Prolonged gastroparesis after corrective surgery for Wilkie's syndrome: a case report. *J Med Case Rep*, 2 (2008), pp. 109-113
- 5 Smith AB, Jones CD. Superior Mesenteric Artery Syndrome: Challenges in Diagnosis and Management. *Journal of Medical Diagnosis*. 20