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Case Report

Gastric volvulus post sleeve gastrectomy converted to gastric bypass in pregnancy: a case report

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ABSTRACT

Complications arising from revision bariatric surgery can be complex due to altered anatomy. This is especially the case in a bariatric patient who becomes pregnant. I present an interesting case of a female patient who suffered a gastric volvulus during pregnancy after having had revision gastric bypass surgery 3 years prior, secondary to an internal hernia. This case highlights that revision bariatric surgery attracts a higher rate of complication, both preoperatively and long term, as well as highlighting the need for a high degree of suspicion for rare causes of abdominal pain in patients post bariatric surgery. Pregnancy is also an added risk factor for these patients.

Keywords: Bariatric Surgery, Internal Hernia, Reoperative Bariatric Surgery, Volvulus

INTRODUCTION

The number of bariatric procedures being performed is rapidly increasing.[1] While there is good data emerging that surgery shows significant long-term weight loss, there is also a growing number of people requiring revision bariatric surgery.[2] Reasons for revision surgery vary, including insufficient weight loss, continued co-morbid disease, weight regain, and other procedure specific complications. Regardless of the indication for revision, it is clear that revision surgery results in higher rates of com-plications, especially in the perioperative period.[3] In addition to the higher complicition rate, these patients present a diagnostic challenge when presenting with abdominal pain. Due to their altered anatomy and predisposition for complications, a increased suspicion of rare causes for abdominal pain is required, including Internal Herniae. With an estimated incidence of between 0.9 and 4.5% post Gastric Bypass procedure, it is not an uncommon complication.[4] Due to the non-specific clinical presentation, it is important to include this on a differential diagnosis for any patient with a history of bariatric surgery, especially revision surgery. If not diagnosed early, this can potentially lead to Gastric Volvulus, as in this case.

CASE REPORT

A 29-year female presented with three weeks of intermittent right sided abdominal pain associated with nausea and vomiting in the context of a second trimester pregnancy (18/40). Observations were within normal limits, and she had mild right sided abdominal tenderness with no evidence of peritonism. Her medical history was significant for a Laparoscopic Sleeve Gastrectomy, complicated by a leak, requiring multiple washouts and eventual conversion to a Roux-en-Y gastric bypass procedure. Blood tests were unremarkable apart from a White Cell Count of 11.2. An MRI abdomen showed free fluid without obvious cause for her pain. Over the next 24hrs her pain increased, and she progressed to generalized peritonitis with sepsis.

A diagnostic laparoscopy was performed, where a gastric volvulus causing ischaemia of her distal stomach was identified (see operative images, Figure 1). She was converted to a laparotomy where the stomach was seen to be torte on its longitudinal axis.

The jejunum had herniated through a pars flaccid defect causing an organ-axial volvulus of her stomach remnant due to its attachment to the roux limb of her gastrojejunostomy. The ischaemic portion of stomach was excised with a stapler and contents of the hernia reduced followed by a new hand sewn gastrojejunostomy, thus separating the gastric and alimentary limbs. She had an uneventful post-operative recovery, and the pregnancy was unaffected.

Upon review of the operation notes from her gastric sleeve leak 3 years prior it was noted that the proximal stomach had been mobilised, including the creation of a pars flaccida defect, as the leak cavity was in this area, and access was required.

DISCUSSION

Internal herniae are potentially common in patients post gastric bypass. They can lead to ischemia, obstruction, and volvulus. Gastric volvulus is uncommon, and can be difficult to diagnose, especially in pregnancy.[5]

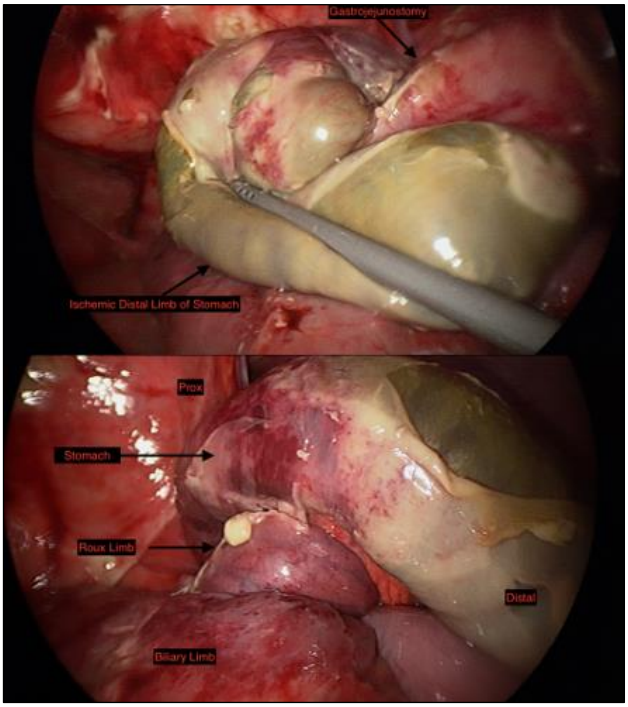

Figure 1: Intra-operatives' image prior to resection.

It occurs when the stomach rotates on its axis more than 180 degrees and if not diagnosed and treated early it can lead to significant complications, including ischemia or gastric perforation.[6] Volvulus is a rare cause of an acute abdomen in pregnancy, occurring in 1/1500 to 1/66,431 deliveries and is the second most common cause of mechanical obstruction.[7,8] Anatomical defects underly the pathogenesis of gastric volvulus, with diaphragmatic defects and gastric ligament defects accounting for the majority of cases. A bariatric patient, especially one who has had multiple procedures, can potentially have multiple defects, and in this case, a gravid uterus is also a contributing risk factor.[9]

Specifically, the gravid uterus has displaced the bowel superiorly allowing the alimentary limb of her bypass to pass through her pars flaccida defect. This is likely to have caused her to have intermittent pain, nausea, and vomiting for three weeks. Eventually, with an expanding uterus, the increasing amount of herniated jejunum caused an organo-axial volvulus leading to gastric ischemia, and subsequent sepsis.

CONCLUSION

The key learning point of this case is that bariatric patients, especially those who have had multiple procedures, require a high index of suspicion for uncommon causes of abdominal pain, and especially for internal herniae. They have abnormal anatomy and attachments, thus predisposing them to un-common causes for obstruction and volvulus. Pregnancy is an added risk factor for these patients.

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