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Unusual sequel of surgery for GERD

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Abstract

Nissen fundoplication is currently the favoured treatment for gastro-oesophageal reflux disease (GERD) refractory to medical management, however, the same surgery may lead to series of debilitating complications. We present a case of 54-year-old gentleman who underwent laparoscopic Nissen laparoscopic Fundoplication for refractory GERD and had multiple complications requiring multiple procedures.

Keywords: GERD, Liver Injury, Dysphagia, Fullness, Bloating.

Introduction

GERD is a debilitating medical condition forcing patients to seek multiple physician consultations over time while a small fraction of patients land up for surgery. Lap Nissen's fundoplication is the most commonly performed procedure for GERD. Eighty to Ninety percent patient attain good symptomatic relief1, however, some patients may have extreme complications after Nissen's fundoplication. Many intraoperative and post operative complications have been described like pneumothorax, gastric or esophageal injury, bleeding associated with splenic or liver injury, dysphagia,

fullness, bloating, and diarrhea or flatulence. In a large cohorts of 2655 patients a Swedish study reported 30-day mortality and morbidity of 0.19% and 3.8%, respectively2 .One of the most disabling complication being Dysphagia . Most of the patient have symptomatic resolution of dysphagia, unfortunately approximately 3-25% Patient report persistent dysphagia after Nissen fundoplication3.Therefore We need to carefully select our patients who will benefit maximum after surgery and have minimum complications.

Case Presentation

56-year male underwent Nissen's fundoplication for symptomatic GERD in 2021. Two weeks later he developed absolute dysphagia which did not respond to conservative management and serial esophageal dilatations. He underwent the release of fundoplication in August 2021 due to persisting absolute dysphagia which was followed by a brief period of relief again to have recurrence of symptoms .He was evaluated and a diagnosis of esophageal stricture was made based on barium swallow .For the same he underwent esophagogastrostomy in January 2022 after which he remained asymptomatic for 6 months after which he started having dysphagia and regurgitation and respiratory distress while lying down.

Investigations

At this stage the patient reported to us. The patient was unable to eat normally as he had severe pain in the chest after ingestion of food which was relieved only after vomiting. This had resulted a marked fear to eat, leading in significant weight loss. Also, his illness was impacting psychological wellbeing and personal life. A CT scan of the chest and abdomen revealed a large portion of the stomach positioned in the left pleural cavity with stasis of contrast within it. A barium swallow study confirmed significant hold up in the stomach. An UGI endoscopy showed a dilated esophagus and a stomach with significant food residue within it. We offered him surgery after a detailed discussion with the patient and his family. At surgery the laparotomy required to be extended to a left sided thoracotomy. The proximal half of the stomach was herniated into the chest and the distal stomach was densely adherent to the left lobe of the liver resulting in a partial obstruction to the gastric outlet. The hiatus was widened to about 7cm with the transverse colon also pulled up to the level of the hiatus. After adhesiolysis the stomach was straightened and gastropexy done. Additionally, an ante colic Roux-en-Y Gastrojejunostomy was done with the posterior wall of the stomach. The patient recovered well in the post-operative period and was started on liquids on the third day after surgery which were well tolerated and gradually increased. A follow up Barium swallow was done on day. Which showed smooth passage of contrast into the duodenum and small intestine with no evidence of stasis in the stomach as was seen in the preoperative tests. The patient has subsequently returned to his native country and after three months of follow up is symptom free and eating well with no pain or vomiting.

Treatment

We offered him surgery after a detailed discussion with the patient and his family. At surgery the laparotomy required to be extended to a left sided thoracotomy. The proximal half of the stomach was herniated into the chest and the distal stomach was densely adherent to the left lobe of the liver resulting in a partial obstruction to the gastric outlet. The hiatus was widened to about 7cm with the transverse colon also pulled up to the level of the hiatus. After adhesiolysis the stomach was straightened and gastropexy done. Additionally, an ante colic Roux-

en-Y Gastrojejunostomy was done with the posterior wall of the stomach.

Outcome and follow-up

The patient recovered well in the post-operative period and was started on liquids on the third day after surgery which were well tolerated and gradually increased. A follow up Barium swallow was done on day. Which showed smooth passage of contrast into the duodenum and small intestine with no evidence of stasis in the stomach as was seen in the preoperative tests. The patient has subsequently returned to his native country and after three months of follow up is symptom free and eating well with no pain or vomiting.

Discussion

Careful patient selection is paramount for better overall outcome after surgery for GERD. The surgical option for management of GERD is considered only for those patients in whom medical management has failed or complications occur .A detailed evaluation prior to surgery allows for identification of those patients who are likely to benefit from the procedure and also exclude those in whom surgery is unlikely to benefit significantly. Surgery for GERD is known to have complications which can have severe bearing on lifestyle and quality of life. Our patient was advised surgery as his GERD related symptoms were refractory to medical treatment. He had severe dysphagia after surgery for which multiple surgical procedures were done – each one followed by worsening of symptoms with a markedly negative impact on his quality of life. When he presented to us he had two primary issues – severe pain and vomiting after ingestion of food. A detailed evaluation identified that the pain and vomiting were a result of gastric stasis consequent to angulation of the stomach and obstruction at the gastric outlet. This was crucial as it helped guide us to the appropriate surgical procedure. The surgery was challenging as it required bringing that the stomach in the abdominal cavity and closing the large diaphragmatic defect and repositioning the colon to its normal position. The major challenge was to bring the stomach down as there were dense fibrous adhesions in the pleural cavity. Even in the presence of an unusual complication a detailed evaluation by a multidisciplinary team and detailed discussion with the patient allowed for a tailored solution. The patient improved dramatically with almost complete resolution of symptoms improved and return to normal daily activities.

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Legend Figures

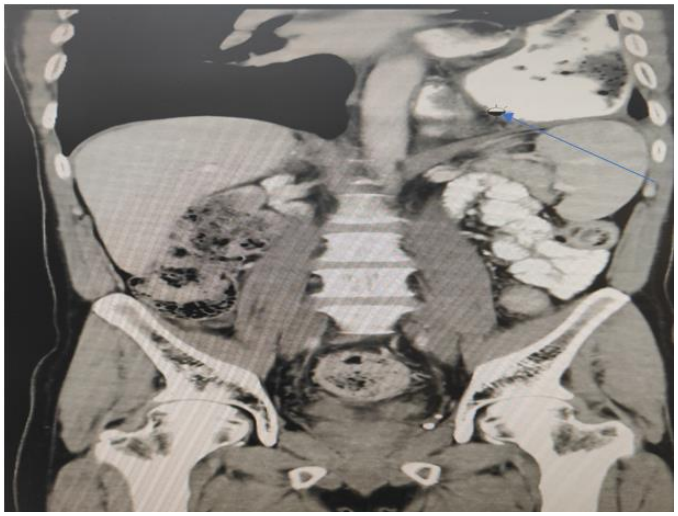

Fig.1: CECT scan-Coronal image showing intrathoracic location of stomach (Highlighted by blue arrow)

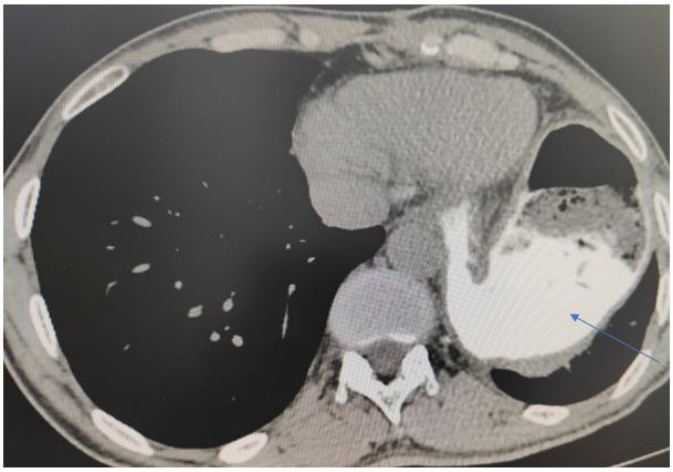

Fig. 2: Axial image showing intrathoracic location of stomach(Highlighted by blue arrow)

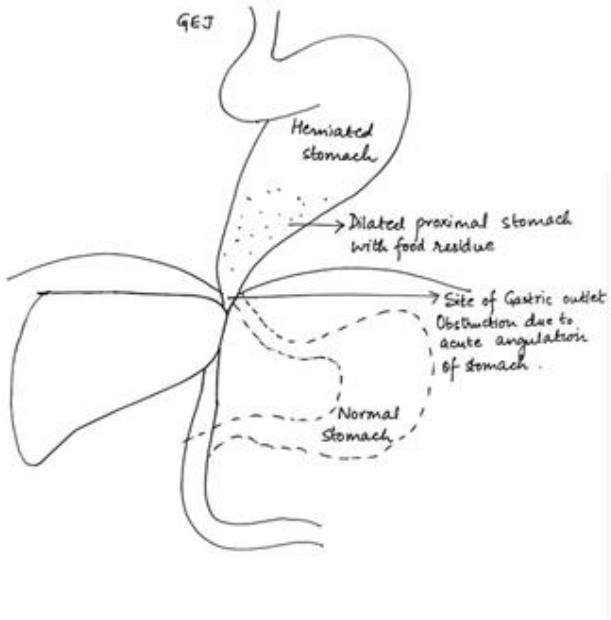

Fig.3: Intraoperative findings line diagram showing herniated stomach through diaphragmatic defect causing gastric outlet obstruction.

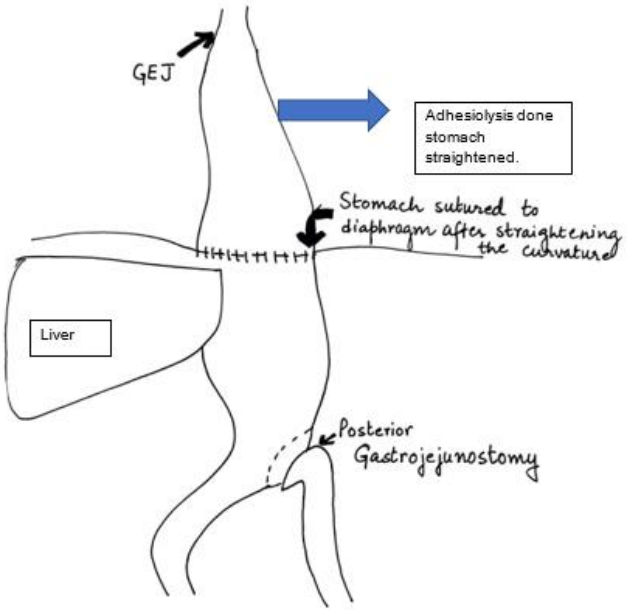

Fig.4: Line diagram showing operative Correction of stomach curvature leading to straightening of stomach curvature and relieve of gastric outlet obstruction .