CASE REPORT

Unveiling Unforeseen Challenges: A case report on stapling and entrapment of Nasogastric tube in laparoscopic sleeve gastrectomy

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ABSTRACT

Laparoscopic sleeve gastrectomy is the removal of a major portion of the stomach especially the fundus, leaving only a thin gastric tube between the esophagus and the duodenum. Sleeve gastrectomy, one of the most popular bariatric surgeries in the modern era, is the easiest to learn and maintains the normal physiological continuity of the gut. Complications inherent to surgical procedures can often be averted through vigilant adherence to checkpoints. We report a complication involving the stapling and entrapment of a nasogastric tube (NGT) during laparoscopic sleeve gastrectomy in a 45-year-old lady with severe obesity (BMI 42.1 kg/m²). Despite multiple unsuccessful attempts to remove the NG tube post-surgery, subsequent examination of the resected specimen in the pathology laboratory revealed a portion of the NG tube embedded in the staple line. Hence the part of the NG tube caught up in the staple line was confirmed. The retained part of the NG tube was successfully removed laparoscopically. She recovered well and was discharged on 4th postoperative day. Since the saying goes; sharing is learning, we report this case for fostering awareness among colleagues to prevent encountering similar challenges, particularly given the prevalent use of staplers in contemporary surgical practices.

Key Words: Sleeve gastrectomy, Stapling, Nasogastric tube.

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INTRODUCTION

Obesity is becoming an epidemic in the twenty-first century affecting two-thirds of adults in both developed and developing countries1. Bariatric surgery has become an integral part of morbid obesity treatment with better survival benefits and better quality of life.[1]. Laparoscopic sleeve gastrectomy (LSG) is increasingly being recognized as an efficient stand-alone procedure for the surgical management of morbid obesity with long-term weight loss stability and regression of associated co-morbidities[2]. Sleeve gastrectomy is a restrictive procedure that involves reducing the volume of the stomach by constructing a gastric tube around a 36 to 38 Fr gastric calibration tube (GCT) passed into the stomach from the oral cavity. However, before proceeding, the stomach is completely decompressed using an NG tube which is removed before passing in a GCT. The complications associated with LSG like staple line leaks, infections, post-operative pneumonia, staple line hemorrhages and fistulas have been reported in the literature[3,4]. We report an unusual case of stapling and entrapment of the nasogastric tube during laparoscopic sleeve gastrectomy.

CASE REPORT

A 44-year-old lady with severe obesity with a BMI of 42.1 kg/m² underwent a laparoscopic Sleeve Gastrectomy. After a multidisciplinary team meeting, she was taken up for laparoscopic sleeve gastrectomy (LSG).[5]

The gastric sleeve was created by using a linear stapler applied alongside a 36-Fr Gastric Calibration Tube (GCT) positioned against the lesser gastric curve passed into the

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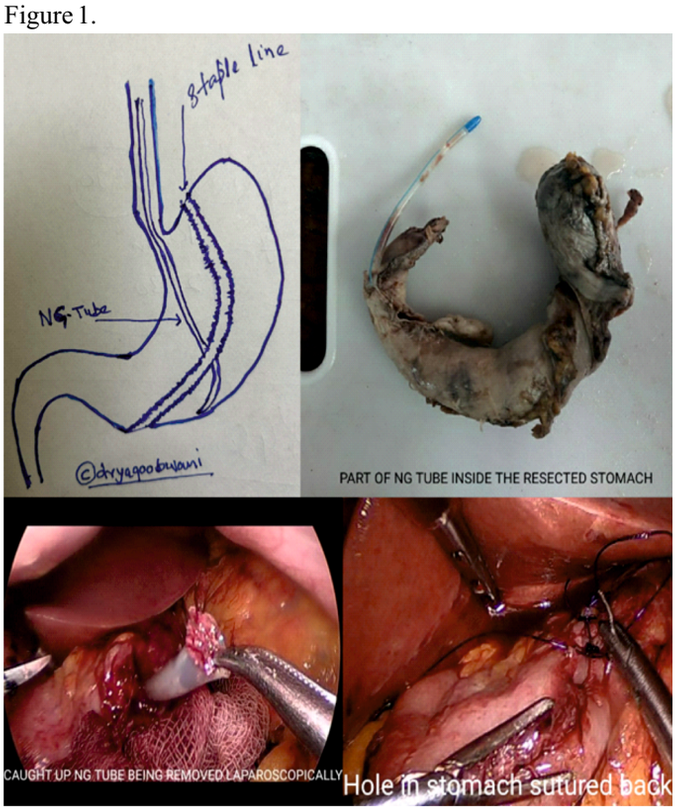
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stomach via the oral cavity. The stomach is completely decompressed using an NG tube which is normally removed before passing in GCT. A lack of communication between the anesthesiologist and the surgeon led to the NG tube getting caught up in the staple line.

The next day of surgery, on rounds, multiple attempts at removal of the nasogastric tube failed to retrieve it. The resected specimen was opened in the pathology laboratory and a part of the NG tube was found inside. Hence the part of the NG tube caught up in the staple line was confirmed. The patient underwent laparoscopy again for the removal of the NG tube [Figure 1]. A small gastrostomy was performed at the site where the nasogastric tube had been stapled, releasing and subsequently removing the tube. The gastric wall was subsequently repaired by polyglactin 2 0 suture and the leak test was systematically performed to rule out any staple line leak. She recovered well and was discharged on 4th postoperative day.

Figure 1.



DISCUSSION

LSG is the most common bariatric surgical technique effective for long-term weight loss stability with regression of many associated co-morbidities. The complication rate associated with LGS is reported between 0 to 10% and a mortality rate of less than 1%[2]. It is mainly a restrictive procedure consisting of the resection and removal of a major part of the stomach, which has an additional impact on hormones such as Ghrelin and Glucagon-like Peptide 1[6].

During LSG, the nasogastric tube is inserted for gastric decompression. The NG tube is removed before passing GCT for the creation of a gastric sleeve. We report an unusual case of stapling and entrapment of the nasogastric tube during laparoscopic sleeve gastrectomy. This complication and its management have been reported in the literature[2]. To prevent such mishaps, there needs to be clear communication between the anesthesiologists and the surgeons, proper time out and fixation of responsibilities. We report this case to foster awareness among our colleagues to prevent encountering similar challenges, particularly given the prevalent use of staplers in contemporary surgical practices.

CONCLUSION

Stapling of the NG tube during SG is rare. It can be avoided by following a strict protocol. More importantly, prevention strategies must include constant communication between the anesthesiologist and surgical team during a sleeve gastrectomy, thereby serving as a pivotal measure in averting consequential complications.

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Financial Interest: None

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REFERENCES

1. Williams N, Ronan O'Connell P, McCaskie A. Bariatric and metabolic surgery. In: Bailey & Love's Short Practice of Surgery. 27th ed., the Collector's edition. Boca Raton, FL: CRC Press; 2018. p. 1203-11.
2. Péquignot A, Dhahria A, Mensah E, Verhaeghe P, Badaoui R, Sabbagh C, Regimbeau JM. Stapling and Section of the Nasogastric Tube during Sleeve Gastrectomy: How to Prevent and Recover? Case Rep Gastroenterol. 2011;5(2):350-4.
3. Frezza E, Worniak S, Gee L. Complications after laparoscopic sleeve gastrectomy for morbid obesity. *Obes Surg.* 2009;19:684–687.
4. Fuks D, Dumont F, Berna P, Verhaeghe P, Sinna R,

Sabbagh C, Demuynck F, Yzet T, Delcenserie R, Bartoli E, Regimbeau JM. Case report – complex management of a postoperative bronchogastric fistula after laparoscopic sleeve gastrectomy. *Obes Surg.* 2009;19:261–264.

5. National Institute for health and Care Excellence. Obesity: Identification, assessment and management. NICE Clinical Guidelines 189. London: NICE 2014.
6. Felsenreich, D. M., Bichler, C., Langer, F. B., Gachabayov, M., & Prager, G. (2020). Sleeve Gastrectomy: Surgical Technique, Outcomes, and Complications. *Surgical technology international,* 36, 63–69.