

Case report

doi:10.5633/amm.2027.0120

ENDOSCOPIC REMOVAL OF A NASOJEJUNAL TUBE ACCIDENTALLY LIGATED TO ROUX-EN-Y
OESOPHAGOJEJUNOSTOMY FOLLOWING A RADICAL GASTRECTOMY FOR STOMACH CANCER:
CASE REPORT

Ivan Pesic¹, Ilija Golubovic¹, Milica Nestorovic¹, Marko Gmijovic¹, Milorad Pavlovic²,
Vanja Pecic³, Zoran Damjanovic⁴, Dimitrije Djordjević⁵.

¹University Clinical Center Niš, Clinic for digestive surgery, Niš, Serbia

²University Clinical Center Niš, Clinic for thoracic surgery, Niš, Serbia

³University Clinical Center Niš, Center for minimal invasive surgery, Niš, Serbia

⁴University Clinical Center Niš, Clinic for vascular surgery, Niš, Serbia

⁵Universtiy of Niš, Faculty of Medicine, Niš, Serbia

Contact: Ivan Pešić

Rajićeva 30A/26, 18000 Niš, Serbia

Email: sicpeni1977@yahoo.com

The use of nasoenteric tubes (NETs) is widespread in clinical practice, particularly for enteral feeding and gastrointestinal decompression following major gastrointestinal surgery. Among them, nasojejunal tubes are commonly used for postpyloric feeding in patients with critical anastomoses. Resistance during removal of a nasojejunal tube due to its inadvertent entrapment within a sutured gastrointestinal anastomosis is a rare surgical complication.

We report a case of a 61-year-old male patient who underwent radical total gastrectomy with Roux-en-Y oesophagojejunostomy for gastric cancer. An attempt to remove the nasojejunal tube ten days postoperatively was unsuccessful. Upper gastrointestinal endoscopy performed two days later revealed that the distal end of the tube had been accidentally ligated with a single stitch to the jejunojejunostomy. The suture was successfully cut using an endoscopic snare, allowing safe removal of the tube.

This case highlights the importance of careful intraoperative handling of feeding tubes and demonstrates that endoscopic management is a safe and effective approach in such complications.

Keywords: Nasojejunal tube, Iatrogenic complication, Endoscopic management, Roux-en-Y anastomosis

ENDOSKOPSKO UKLANJANJE SLUČAJNO LIGIRANE NAZOJEJUNALNE SONDE NAKON ROUX-EN-Y EZOFAGOJEJUNOSTOMIJE POSLE RADIKALNE GASTREKTOMIJE: PRIKAZ SLUČAJA

Ivan Pešić¹, Ilija Golubović¹, Milica Nestorović¹, Marko Gmijović¹, Milorad Pavlović², Vanja Pecić³, Zoran Damjanović⁴, Dimitrije Đorđević⁵

¹Univerzitetski klinički centar Niš, Klinika za digestivnu hirurgiju, Niš, Srbija

²Univerzitetski klinički centar Niš, Klinika za grudnu hirurgiju, Niš, Srbija

³Univerzitetski klinički centar Niš, Centar za minimalno invazivnu hirurgiju, Niš, Srbija

⁴Univerzitetski klinički centar Niš, Klinika za vaskularnu hirurgiju UKC Niš, Niš, Srbija

⁵Univerzitet u Nišu, Medicinski fakultet, Niš, Srbija

Kontakt: Ivan Pešić

Rajićeva 30A/26, 18000 Niš, Srbija

E-mail: sicpeni1977@yahoo.com

Upotreba nazoenteričnih sondi (NET) široko je rasprostranjena u kliničkoj praksi, naročito za enteralnu ishranu i gastrointestinalnu dekompresiju nakon velikih operacija digestivnog trakta. Među njima, nazojejunalne sonde se često koriste za postpiloričnu ishranu kod pacijenata sa rizičnim anastomozama. Otežano uklanjanje nazojejunalne sonde usled njenog nenamernog zahvatanja šavom u gastrointestinalnoj ili intestinalnoj anastomozi predstavlja retku hiruršku komplikaciju.

Prikazujemo slučaj 61-godišnjeg pacijenta sa karcinomom želuca, kod koga je urađena radikalna totalna gastrektomija sa Roux-en-Y ezofagojejunoanastomozom. Pokušaj uklanjanja nazojejunalne sonde desetog postoperativnog dana bio je neuspešan. Endoskopski pregled gornjeg gastrointestinalnog trakta pokazao je da je distalni kraj sonde fiksiran jednim šavom za jejunojejunoanastomozu. Šav je uspešno presečen endoskopskom omčom, nakon čega je sonda bezbedno uklonjena.

Ovaj prikaz ukazuje na značaj pažljivog intraoperativnog rukovanja sondama, kao i na efikasnost i bezbednost endoskopskog pristupa u rešavanju ovakvih komplikacija.

Ključne reči: nazojejunalna sonda, jatrogena komplikacija, endoskopsko lečenje, Roux-en-Y anastomoza

Introduction

Nasoenteric feeding is the most widely used modality of enteral nutrition (EN). Early and aggressive EN maintains gastrointestinal integrity, prevents mucosal atrophy, attenuates injury-related stress, preserves immunocompetence and normal gut flora (1,14). Nasoenteric tubes (NETs) are used for a variety of indications, including gastrointestinal decompression and enteral feeding, particularly in patients requiring postpyloric nutrition (2,3,15). Their placement rarely results in complications (2,3). The accidental stitching of a nasojejunal tube to a gastrointestinal anastomosis is an infrequent surgical complication (4-7). Our aim was to present the successful endoscopic removal of a nasojejunal tube which had been accidentally ligated to the jejunojejunostomy in a patient with stomach cancer after a radical total gastrectomy following Roux-en-Y oesophagojejunostomy.

Case report

A 61-year-old man was admitted to hospital with endoscopically and histopathologically gastric cancer. He underwent a radical total gastrectomy with a Roux-en-Y oesophagojejunostomy. During the postoperative period, oral feeding was discontinued for 9 days and the patient was fed via a nasojejunal tube. On the 10th postoperative day, a contrast examination showed no leakage of both anastomoses, so a decision was made for tube removal. Surprisingly, repeated attempts to remove the tube were unsuccessful. The tube was arrested at 65 cm aboral and further attempts were clearly unsafe. An abdominal X-ray was performed and did not reveal any abnormalities in tube position. On the 12th postoperative day, an urgent endoscopy revealed that the distal end of the tube had been accidentally fixed with a single stitch to the jejunojejunostomy. Subsequently, the stitch was cut and the remaining portion of the tube was removed using an endoscopic snare (Figure 1,2). Soon after, the patient was discharged in good condition.

Figure 1. Endoscopic view showing the distal end of the nasojejunal tube (red arrow) kinked and inadvertently sutured to the jejunojejunostomy.



Figure 2. Endoscopic view demonstrating manipulation and release of the nasojeunal tube using an endoscopic instrument (red arrow).



Discussion

Inadvertent suturing of a nasojeunal tube is a rare but potentially serious complication of gastric surgery and does seem to occur from time to time (6,8–11). It is probably more prone to occur in laparoscopic than in open surgery due to the loss of tactile feedback in the former. A high index of suspicion is essential when a tube is mechanically “stuck” after gastric surgery (6). Before applying stitches at the anastomosis site, it is very important to lift the anterior wall of the intestine and ensure that no tube is included. Any attempt to forcibly remove the nasojeunal

tube should be avoided as this may lead to serious complications, including anastomotic dehiscence, perforation, and bleeding (13).

In the current case, endoscopic removal of the stitched nasojejunal tube was beneficial as it enabled early recovery and continuation of treatment. Upper gastrointestinal endoscopy is the investigation of choice as it allows both diagnosis and safe removal, in correlation with other authors (6,11). However, due to the risk of anastomotic disruption, endoscopy should be performed cautiously in the early postoperative period (13).

Similar cases of inadvertent fixation of nasoenteric tubes to gastrointestinal anastomoses have been described in the literature, although they remain rare (6,11). In most reports, the diagnosis was established after failed attempts at tube removal, with endoscopy playing a crucial role both in confirming the diagnosis and enabling minimally invasive management. These cases emphasize the importance of early recognition and avoidance of forceful extraction, as well as the value of endoscopic techniques in resolving such complications safely and effectively, thus preventing the need for reoperation.

Conclusion

Inadvertent entrapment of a nasojejunal tube after total gastrectomy is an infrequent surgical complication. Upper gastrointestinal endoscopy represents a safe and effective minimally invasive method for resolving this complication and should be considered the first-line approach.

Ethical approval and consent to participate

The study was conducted in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments.

Consent for publication

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. The patient was informed that all personal data would be anonymized to ensure confidentiality.

Conflict of interest

The authors declare that they have no conflict of interest related to this study.

Funding

This study received no external funding.

Authors' contributions

All authors contributed equally to the conception, data collection, writing, and revision of the manuscript. All authors read and approved the final version of the manuscript.

AMM Paper Accepted

References

1. Prabhakaran S, Doraiswamy VA, Nagaraja V, et al. Nasoenteric tube complication. *Scand J Surg*. 2012;101:147–155.
2. Akbaba S, Kayaalp C, Savkilioglu M. Nasogastric decompression after total gastrectomy. *Hepatogastroenterology*. 2004;51:1881–1885.
3. Santhanam V, Margaron M. Removal of self-knotted nasogastric tube: Technical note. *Int J Oral Maxillofac Surg*. 2008;37:384–385.
4. Sucandy I, Antanavicius G. Endoscopic retrieval of a retained nasogastric tube. *N Am J Med Sci*. 2011;3(10):486–488.
5. Pequignot A, Dhahria A, et al. Stapling and section of the nasogastric tube during sleeve gastrectomy. *Case Rep Gastroenterol*. 2011;5(2):350–354.
6. Shaaban H, Armstrong C. Nasogastric tube accidentally stitched to the stomach. *Endoscopy*. 2009;41:E61.
7. Abu-Gazala S, Donchin Y, et al. Nasogastric tube complications during bariatric surgery. *Surg Obes Relat Dis*. 2012;8(5):595–600.
8. Mahmood A, Joseph E, Robinson RB, et al. Role of endoscopy in nasogastric tube removal. *Int J Surg*. 2007;5:342–344.
9. De Nucci G, D'Urbano C, Manes G. Endoscopic management of entrapped nasogastric tube. *Dig Liver Dis*. 2021;53(3):212.
10. Kim SY, et al. Endoscopic removal of accidentally ligated nasogastric tube. *Endoscopy*. 2016;48:E18.
11. Azzam AZ, Azzam KA, Amin T. Removal of nasogastric tube accidentally stitched to Roux-en-Y oesophagojejunostomy. *Sultan Qaboos Univ Med J*. 2018;18(1):110–111.
12. Bharadwaj G, Attri PC, Verma P, et al. Iatrogenic complications of NG tube. *WebmedCentral General Surgery*. 2013;4(6):WMC004098.
13. ASGE Standards of Practice Committee, Ben-Menachem T, Decker GA, et al. Adverse events of upper GI endoscopy. *Gastrointest Endosc*. 2012;76:707–718.
14. Singer P, Blaser AR, Berger MM, et al. ESPEN guideline on clinical nutrition in the intensive care unit. *Clin Nutr*. 2019;38(1):48–79.
15. Metheny NA, Meert KL, Clouse RE. Complications related to feeding tube placement. *Nutr Clin Pract*. 2019;34(1):30–40.