

## An unusual complication of nasogastric tube

Ibrahim Bıyıkoğlu<sup>1</sup>, Seyfettin Köklü<sup>1</sup>, Levent Filik<sup>1</sup>, Bilal Ergül<sup>1</sup>, Namık Özcan<sup>2</sup>, Serdar Köseoğlu<sup>2</sup>

(1) Department of Gastroenterology, Ankara, Turkey ; (2) Department of Anesthesiology and Reanimation, Ankara Education and Research Hospital, Ankara, Turkey.

### To the Editor,

Multiple case reports of complications of malpositioned feeding tubes continue to surface. Most are due to inadvertent placement in the respiratory tract. Isolated reports of a nasally placed tube entering the brain following head injury continue to occur, as do reports of esophageal and gastric perforation in neonates. A recent study showed that malpositioned tubes are not routinely recorded in risk management databases (1). But maybe the most important complication of nasogastric tubes (NGT) is GI bleeding. It has been reported that prolonged use of NGT can even result in life-threatening aorto-esophageal fistula formation in patients with a double aortic arch (2). Herein we report a case with a buried NGT and GI hemorrhage after the unsuccessful attempt to remove the NGT.

A 70 years old woman had anoxic brain syndrome due to carbon monoxide intoxication 2.5 years ago. Since her relatives denied percutaneous endoscopic gastrostomy (PEG) she had been fed enterally by a NGT for the last 30 months at home. The last NGT was placed 7.5 months ago. At her last examination by the family practitioner, the NGT had been tried to change. After the unsuccessful attempt to remove the NGT she had been referred to the gastroenterology department. At the same day she presented to the emergency department of our hospital with melena and a hemoglobin level of 13.1 gr/dl. Upper gastrointestinal endoscopy showed that the bleeding came from the nasogastric tube buried in an ulcer in cardia. There was a little amount of hematinized blood in the stomach but active bleeding was not observed. The tip of NGT caused a superficial ulcer at corpus of stomach and kinked at fundus (Fig. 1). At endoscopy the tip of the NGT was grasped with a forceps and the kink was partly corrected by pushing the tip through the distal end with appropriate rotation of the endoscope. The NGT which is buried in cardia was removed by pulling it through the opposite side of the esophagus by forceps (Fig. 2). Luckily the hemorrhage at this moment stopped by itself after the formation of coagulum on and around the ulcer. At the third day of her hospitalization endoscopic control was performed and an ulcer with no sign of bleeding was observed in cardia. During the same procedure PEG catheter was placed into her stomach.

The knotting of an intragastric tube is a rare complication. The cases about knotted and lodged NGT's in the posterior nasopharynx (3), knotted in the small gastric



Fig. 1. — Endoscopic appearance of kinked NGT in stomach

remnant after gastric surgery (4), knotted and impacted in esophagus which is causing tracheoesophageal fistula (5) has been reported. To our knowledge we report the first case in whom the kinking is the cause of the impaction in the stomach.

A NG tube may be used in hospitalized individuals or individuals in home care, but generally only for periods of less than a month. When tubes are left for a prolonged period of time, the ulceration of the nostril, esophagus and the gastric mucosa occurs due to pressure of the tube. If enteral feeding is needed for a prolonged period of time percutaneous, enteral or gastric access is preferred since it is safe, successful and not prone to obstruction. Since it was not possible to convince her relatives for PEG procedure in our case, the duration of nasoenterally feeding was extremely long (30 months) and the last changing time of the NGT was about 8 months ago.

The usage of nasogastric or nasoenteral tubes for feeding for a prolonged period of time can cause complications like aspiration pneumonia, kinking, ulceration of gastrointestinal mucosa and GI hemorrhage. Since PEG

Correspondence to : Bilal Ergül, M.D., Ankara Education and Research Hospital, Department of Gastroenterology. E-mail : bilalergul@gmail.com

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Fig. 2. — Appearance of NGT after removal

is safe and successful it should be preferred to NG or NE tube feeding. But sometimes it is difficult to persuade the patient for this procedure. Some cases have been report-

ed about unremovable NGT s which has knotted in nasal cavity and stomach (3-5). But the reason was a kink in our case.

In conclusion, complications of NGT are rare but may be cause serious especially in an ageing population with concomitant diseases.

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