“Lariat Loop” Knotting of a Nasogastric Tube: An Ounce of Prevention

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Atrophic complications in medicine are increasing in frequency, especially in critical care environments because of the use of invasive procedures and monitoring. Although nasogastric tubes are routinely used for decompression and/or feeding of critically ill patients, the number of potential complications almost exceeds the indications for use. Knotting of small-bore feeding tubes and nasogastric tubes, during both insertion and removal, is rare, but it can lead to serious complications including respiratory distress, severe laryngeal injury, and tracheoesophageal puncture. Knotting of large-caliber nasogastric tubes is even more uncommon.

In this report we describe a case of “lariat loop” knotting of a plastic nasogastric tube during removal of the tube.

Case Report

An 80-year-old man had undergone uneventful off-pump coronary artery bypass surgery. He was discharged from the intensive care unit on the following day. On his third postoperative day, he started vomiting and became unconscious and hypotensive; an atrioventricular block was detected. He was resuscitated and intubated, and a plastic nasogastric tube (14F) was easily inserted to decompress his stomach. The patient’s condition improved. On the following day, he was extubated and it was decided to remove the nasogastric tube.

It was difficult to pull the tube out of the patient’s stomach, and then the tube got stuck in his nasopharynx. The patient experienced breathing difficulty and pain. It appeared that the nasogastric tube had become knotted or twisted. It was decided to cut off the proximal end of the nasogastric tube at the level of the nostrils, and then, under direct visual control with a laryngoscope and with the aid of a Magill forceps, the tube was removed through the mouth. We were surprised to discover a perfectly formed lariat loop knot at the end of the nasogastric tube (see Figure).

Discussion

We realized that the nasogastric tube had been inserted too far and somehow had formed itself into a very unusual knot, the lariat loop knot (a cowboy’s lasso knot), which then tightened as the nasogastric tube was pulled out. In addition, the intragastric part of the tube that formed the knot may have become rigid as a result of the action of hydrochloric acid or the alkaline content entering the patient’s stomach from the duodenum.

This case illustrates that even a simple procedure such as the insertion of a nasogastric tube can have potentially serious consequences. Only the necessary length of tube should be used, and this length should be determined by measuring from the nostril along the side of the face past the ear to the xiphoid process. The appropriate length should be marked with a piece of thread, and then, under direct visual control with a laryngoscope and with the aid of a Magill forceps, the tube was removed through the mouth. We were surprised to discover a perfectly formed lariat loop knot at the end of the nasogastric tube (see Figure).
of tape or by noting the marks on the tube just beyond this point. As the saying goes, “an ounce of prevention is worth a pound of cure.”

REFERENCES
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