

Inadequate Nasogastric Drainage In Acute Intestinal Obstruction (A Rare Cause With Literature Review)

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Abstracts: Background: Nasogastric aspiration is bedside procedure in surgical wards. Amount and type of nasogastric drainage is helpful in establishing conditions such as intestinal obstruction and its level. Knotted nasogastric tube is rarely reported in literature. In our case of intestinal obstruction this rare condition led to a diagnostic dilemma. Through this we want to highlight that in patients with intestinal obstruction and inadequate nasogastric tube drainage, possibility of this rare complication should be thought of. [Agarwal A NJIRM 2015; 6(4):105-106]

Key Words: Knotted, Nasogastric tube, Inadequate drainage.

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Introduction: A 45 year old female presented to emergency with features of intestinal obstruction. Nasogastric tube insertion was done to decompress the bowel. There were no features of any resistance felt during insertion. Patient was clinically and radiologically diagnosed with acute small bowel obstruction and was planned for laparotomy. The nasogastric aspirate was nil even after 6 hours. Air was pushed through the tube and the patient's chest was auscultated to see for tracheal insertion of tube but no sound was heard. Decision to replace the tube was taken , however, resistance was felt during removal. Oral examination revealed a knotted nasogastric tube in the nasopharynx which was removed using MacGill forceps. (Figure 1)

Figure 1: Removed knotted nasogastric tube



Discussion: Nasogastric tube is a common bedside procedure done for abdominal decompression and feeding purposes.¹Complication rates for insertion range from 0.3-15%.²Common complications include tube recoiling in the patient's throat, epistaxis and entry of tube in respiratory passage .Other less frequent complications are sinusitis, parotitis, perforation of esophagus and intracranial insertion.³

Knotted of ryles tube has been reported in the literature, the incidence though appears low⁴. Risk factors include smaller diameter tubes, insertion deep into the stomach ,interference with an endotracheal tube in an intubated patient and small stomach following gastropasty^{5,6,7}. Once knotted, the traction during retrieval tightens the knot.Larger diameter tubes and the avoidance of excess advancement into the stomach may minimize this complication⁴.It has been said that pushing or pulling of the nasogastric tube after it has been placed, either by an operator or due to coughing or neck movement may lead to the formation of a loop⁸.It is imperative to measure the correct length of insertion of the nasogastric tube prior to its placement and mark this length with a marker or tape so that only the necessary length of the tube is inserted and any unrecognized tube movement can be detected.

Two types of knot have been described- true knot and lariat knot.Unusual types of knot have previously been reported with traumatic complications⁹.

A lateral radiograph of the head and neck may aid in the diagnosis of a suspected coiled or knotted nasogastric tube. Once diagnosed, no guidelines are available for safe removal. Wright et al devised "SAVES" mnemonic for the nursing staff for early diagnosis and call for help from a doctor.¹

S – Stop immediately if resistance is felt

A – Ask patient to open their mouth

V – Visualise oral cavity

E – Evaluate what you see – simple knot or lariat in the nasogastric tube?

S – Summon help from a doctor to facilitate safe removal.

We used Macgill forceps for removal in our case. Other methods include use of an endoscope or a nasopharyngeal airway⁷.

Conclusion: Knotted nasogastric tube is a rare complication that is rarely encountered. In cases where the drainage is inadequate, high index of suspicion is required to diagnose and revert this complication of a common bedside procedure.

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