

NG Tubes: Optional in Some Patients?

Sydney Marsh, MD

March 2019

Story from the front lines

A man in his 50s, who was admitted to the medical service several times, on the fourth day of his stay developed pain in his epigastric region and was found to have a small bowel obstruction (SBO) on abdominal imaging. He was treated conservatively with bowel rest, intravenous (IV) fluids, and placement of a nasogastric (NG) tube. His SBO resolved by the sixth hospital day with self-removal of his NG tube. Unfortunately, on the fourteenth day of his hospitalization, he developed new onset nausea and vomiting, and abdominal imaging suggested a recurrent SBO despite an unremarkable abdominal exam. At this point, general surgery was consulted and recommended conservative management for this episode. He was placed back on bowel rest and given IV fluids. An NG tube for gastric decompression was ordered but became quite difficult to place by even the most experienced members of his team. He became quite agitated at the thought of the tube being placed again and started refusing further attempts. Eventually the tube placement was successful on day seventeen of his stay, but he continued to complain about the tube and the discomfort it brought him. His recurrent SBO resolved the following day and the NG tube was removed.

Teachable Moment

Small bowel obstruction is a common inpatient diagnosis, and with more than half of patients managed non-operatively¹, its clinical course is frequently encountered by the internist. Although current guidelines for conservative management of SBO still recommend gastric decompression², recent literature has questioned the utility of NG tubes in some cases. A retrospective study done by Berman and colleagues did not find a significantly reduced rate of death, surgery, or bowel resection between patients who received NG tube placement and those who did not. However, they did note patients receiving NG decompression had a longer hospital stay than those who did not have the tube placed¹. A second study by Fonseca et al. attempted to identify which patients might be successfully managed without NG decompression³. Their retrospective analysis found that presenting symptoms, rather than radiological findings, correlated higher with NG tube drainage, specifically, the presence of abdominal distension and tympany. Interestingly, the presence of emesis, current or remote, did not correlate well with NG tube drainage. Further, they comment on complications commonly associated with NG tube placement in non-operatively managed patients, including significantly higher rates of pneumonia and respiratory failure, longer time to resolution and hospital stay, and higher rates of discharge to a rehab facility³. Based on these studies, amending conservative management in patients without significant findings on abdominal exam to bowel rest and IV fluids alone may provide sufficient treatment for SBO. This case is a good example of the potential harms of over-treatment in medicine. He clearly did not want further attempts at NG tube placement to occur, and only conceded after multiple conversations with several of his medical team members. However, a benign abdominal exam and his clearly stated preference regarding the NG tube questions whether the NG tube was avoidable, and if his SBO may have resolved with simply bowel rest and IV fluids. Given the current evidence for conservative management of SBO, it may be a reasonable option to forego NG decompression in patients such as ours and let time's medicinal properties work in our favor.

References

1. Berman DJ, Ijaz H, Alkhunaizi M, Kulie PE, Vaziri K, Richards LM, and Meltzer AC. (2017). Nasogastric decompression not associated with a reduction in surgery or bowel ischemia for acute small bowel obstruction. *Am J Emerg Med* 35: 1919-1921.

2. Ten Brock RPG, Krielen P, Di Saverio S, Coccolini F, Biffi WL, Ansaloni L, et al. (2018). Bologna guidelines for diagnosis and management of adhesive small bowel obstruction (ASBO): 2017 update of the evidence-based guidelines from the world society of emergency surgery ASBO working group. *World J Emerg Surg* 13(24).
3. Fonseca AL, Schuster KM, Maung AA, Kaplan LJ, and Davis KA. (2013). Routine Nasogastric Decompression in Small Bowel Obstruction: Is It Really Necessary? *Am Surgeon* 79(4): 422-428.