Case Report

Missing PEG tube found at the ileocecal valve✩

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Percutaneous endoscopic gastrostomy (PEG) tubes are indicated in cases of oropharyngeal or esophageal dysphagia to allow alimentation. Complications are superficial and minor, however obstruction in the setting of PEG migration has been noted. Most obstructions remain proximal, localized to the pyloric or pre-pyloric region, though distal migration to the large intestine, including the cecum, have been noted. Here we present a case of an elderly gentleman with advanced dementia complicated by oropharyngeal dysphagia who presented in the context of a missing PEG tube without adjunctive symptoms. Initial imaging and Esophagogastroduodenoscopy were unremarkable and a repeat PEG tube was placed. Thereafter, repeat imaging demonstrated an oval-shaped foreign object within the right lower quadrant concerning for a migrated original PEG tube, which was confirmed by Computed Tomography with migration to the ileocecal valve. Colonoscopy was subsequently performed with PEG tube retrieval. This case highlights the need to maintain a high index of suspicion for distal PEG tube migration even in the absence of overt symptomaticology to prevent further complications such as small or large bowel obstruction.

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Introduction

Percutaneous endoscopic gastrostomy (PEG) tube placement is one of the most common endoscopic procedures performed worldwide. [1] Although the procedure is generally safe and well tolerated, various complications may arise. The majority of these complications, occurring in 13%-40% of patients are minor such as, maceration secondary to gastric content leakage, tube malfunction, non-healing stoma, peristomal pain, and infection. [2] Major complications that require further intervention are life threatening have been reported in 0.4%-4.4% cases. These include stomal leakage with peritonitis, necrotizing fasciitis, gastric bleeding, internal organ injury, sepsis, and tumor seeding at stoma. [2] Gastric outlet obstruction is a rare, potentially major complication caused by PEG tube migration past the pyloric area. Here we describe a case of PEG migration past the pyloric area and into the colon.

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Case presentation

An 80 year-old male with advanced dementia complicated by chronic dysphagia status post PEG tube placement several months prior presented to the emergency department with a dislodged PEG tube. The patient was in his usual health until one day prior to presentation when his wife noticed the tube was missing. During this time, she noted no evidence of abdominal discomfort, no nausea or vomiting, and no evidence of constipation with normal stooling. On presentation to the Emergency Department, the patient was hemodynamically stable. Physical examination was remarkable for a chronically-ill appearing male with baseline advanced dementia in no distress. Abdominal examination demonstrated an unremarkable stoma with no visualized PEG in place. The abdomen was soft and nondistended with no noted tenderness, rebound, or guarding. Diminished bowel sounds were appreciated. Laboratory studies were unremarkable. Diagnostic imaging included an abdominal radiograph that demonstrated air-filled, mildly dilated loops of bowel throughout the abdomen, which was nonspecific but concerning for ileus versus early and/or partial obstruction. Gastroenterology was consulted for Esophagastroduodenoscopy (EGD) which failed to reveal the presence of the PEG tube within the stomach and a PEG tube was subsequently replaced. Post-procedural x-ray imaging of the abdomen demonstrated the presence of

Fig. 1 – Abdominal Radiograph showing air-filled mildly dilated loops. Oval structure (arrow) is noted in the RLQ
an oval-shaped foreign object within the right lower quadrant concerning for a migrated PEG tube (Fig. 1). Computed Tomography confirmed the presence of a retained PEG tube with a persistently inflated balloon localized to the ileocecal valve with associated obstruction (Fig. 2). Gastroenterology was once again consulted and recommended colonoscopy. The peg tube was successfully retrieved endoscopically after 3 days with subsequent alleviation of the obstruction. The patient was started on tube feed which he tolerated and discharged in stable condition (Figs. 3 and 4).

Discussion

Several cases have highlighted PEG tube migration - to the pylorus, duodenum, ileocecal valve, and even to the transverse colon in the setting of a gastrocolic fistula. [3-8] Among these cases, some patients were notably asymptomatic, similar to the patient presented in this case. In other reports, patients demonstrated abdominal cramping, pain, diarrhea, or non-bilious vomiting. Management depended in part upon the
Fig. 3 – Computed Tomography (coronal view) showing percutaneous endoscopic gastrostomy tube within the ascending colon (arrow).

location of the retained PEG tube and the clinical state of the patient. In two cases where the inflated internal balloon of the gastrostomy tube had migrated and become trapped in the duodenum, management was accomplished via balloon deflation, endoscopic retrieval back into the stomach, and subsequent balloon inflation and securement to the abdominal wall. [4,6] In another case, the balloon had migrated to the ileocecal valve, similar to our case, however the patient was managed conservatively and the PEG tube was monitored radiographically until expelled via normal defecation. [5]

A additional report delineated a case of an inflated PEG balloon that migrated to the ileocecal valve. In this case, the patient presented three days after her PEG tube went missing with symptoms of vomiting, abdominal pain, and fever and ultimately required an emergent laparotomy for a small bowel obstruction with associated enterotomy and ileocolicatomy. [8] These reports underscore the differences not only in presentation but in management, highlighting the lack of consensus in management and the need for case-by-case evaluation.
Internal migration of a PEG tube is a complication that can go undetected in patients with dementia. Timely retrieval is important to prevent severe complications. Management of the retained PEG tube should be decided on a case-by-case basis depending on the location of the device and the clinical presentation of the patient.

**Patient consent**

Consent obtained over phone from patient’s wife who is the POA, as patient does not have decision making capacity. The wife has been explained that this case has educational value and we are willing to publish the case without revealing the identity of the patient. She understood everything explained and had no questions for me. We were given permission to publish the case.

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