

Gastrocolocutaneous Fistula After PEG tube Placement, a Review of Why they Occur and How to Fix Them



Claire Terez MD¹, Douglas Ewing MD FACS², Gregory Grimberg MD¹

1. Rutgers New Jersey Medical School, 2. Hackensack University Medical Center



Introduction:

Percutaneous endoscopic gastrostomy (PEG) tubes are a popular way to establish enteral feeding access given their ease of placement and minimally invasive nature. However, they are associated with various complications and a very rare complication is misplacement of the tube through the colon. We present a case of transcolonic PEG tube placement contributing to septic shock repaired laparoscopically as well as a review of why this complication occurs and how to manage it.

Case:

Patient is a 55 year old female who presented to the hospital with altered mental status and seizures, she was intubated for airway protection and admitted to the medical ICU. She was diagnosed with autoimmune encephalitis and developed numerous issues throughout her hospital course. She remained intubated for more than two weeks and underwent PEG tube placement by the gastroenterology service. Over the next days her leukocytosis worsened, and she became increasingly hypotensive, eventually requiring vasopressors. CT scan was notable for transcolonic PEG tube placement. Given this general surgery was consulted and she was taken to the operating room. Laparoscopically, the PEG was removed from the stomach and the ends of the tube were grasped and brought up towards the abdominal wall. A transverse colostomy was then created by opening the colon from the PEG tube's entrance to exit site. Additionally, a new gastrostomy tube was placed.

Prevention

"Safe tract" technique

Transillumination

Appropriate Insufflation

Finger Pressure

Management

Signs of Sepsis/ Peritonitis

- Operative repair
- Laparotomy vs. Laparoscopy

Asymptomatic

- Tube removal and spontaneous closure
- Endoscopic closure
- Elective surgical closure

Discussion:

Malposition of PEG is a serious complication and can occur at time of insertion or replacement. In addition to proper "safe tract" technique and well defined transillumination, it has been thought that over-insufflation of the stomach and small intestine will lift the transverse colon and thus increase chance of injury. In regards to managing gastrocolocutaneous fistulas, patients with signs of sepsis and peritonitis require surgical intervention. However, in more stable patients, there are multiple options for management within the literature including tube removal and observation as well as laparoscopic or endoscopic closure of the fistula.

Conclusions:

Gastrocolocutaneous fistulas secondary to PEG tube insertion occur rarely and there is currently no well established way to manage them. Patients with sepsis and signs of peritonitis without other source obviously require surgical repair, however in stable patients more research is required to determine best practices.