



## Cutaneous-Colonic Fistula Following Percutaneous Endoscopic Gastrostomy (PEG) Tube Insertion: A Case Report

Mohamad Hafez R Alrashid\*, Amit Kumar Kumar, Thomas Cherukara Philip, Noble Thomas and Saeed Akram Alkweider

Kuwait Hospital Sharjah, Emirates Health Services, United Arab Emirates

\*Corresponding Author: Mohamad Hafez R Alrashid, Kuwait Hospital Sharjah, Emirates Health Services, United Arab Emirates.

Received: May 12, 2025

Published: May 30, 2025

© All rights are reserved by Mohamad Hafez R Alrashid, *et al.*

### Abstract

We present the case of an 82-year-old female with multiple comorbidities, who developed a cutaneous-colonic fistula following PEG tube placement. The case illustrates the time of presentation, the clinical symptoms, diagnostic workup, and management approach. Emphasis is placed on the importance of early recognition and prompt intervention, which included endoscopic removal of the PEG tube, closure of the gastric-colonic fistula using clips, and secondary healing of the cutaneous-colonic communication. This report underscores the need for careful follow-up in patients with PEG tubes, particularly in those at higher risk for late complications [4,5].

**Keywords:** Fistula; Percutaneous Endoscopic Gastrostomy; Tube Insertion; Cutaneous-Colonic

### Introduction

Percutaneous endoscopic gastrostomy (PEG) tube insertion is a widely used, minimally invasive procedure that provides long-term enteral nutrition for patients who are unable to maintain adequate oral intake. Although PEG tube placement is generally considered safe, it is associated with a variety of potential complications, which can be classified as immediate, early, or late [1].

Late complications, such as gastrointestinal perforation, migration of the PEG tube, and fistula formation, are less common but can present significant challenges in clinical management [2,3]. This case report highlights one such late complication, a cutaneous-colonic fistula, which occurred after PEG tube insertion.

### Case Description

An 82-year-old female with multiple comorbidities, a bedridden status, and dependent on tracheostomy and home ventilator support, presented with a complication following percutaneous

endoscopic gastrostomy (PEG) tube placement. Two months after the gastrostomy tube insertion, the patient was brought in by her family, reporting a brown-colored discharge around the gastrostomy tube stoma. A contrast-enhanced abdominal CT scan was performed, which revealed the following: the PEG tube tip and cuff were correctly positioned within the stomach, but the tube passed through the interposed transverse colon anterior to the stomach. Furthermore, the colon had herniated through the diaphragm into the right thoracic cavity. Contrast injection through the PEG tube demonstrated adequate filling of the stomach without evidence of leakage around the tube or filling of the fixed transverse colon. The contrast was observed to pass into the duodenum and small bowel loops without signs of obstruction. However, delayed imaging (approximately 6 hours later) revealed that the contrast had entered the herniated transverse colon through the diaphragm, filling it and suggesting a faint tinge of contrast leakage around the PEG tube. This finding was indicative of a colo-cutaneous fistula. After a detailed discussion with the family, it was decided to proceed with the removal of the PEG tube. The procedure was conducted

via gastroscopy, during which the PEG tube was removed. A small cholangioscope (Spyglass scope) was passed through the external opening of the abdominal wall and confirmed that the colonic lumen was patent, and the gastric-colonic fistula was closed using endoscopic clips. The cutaneous-colonic communication was subsequently covered with a dressing, and the wound was left to heal secondarily. The patient kept nothing per mouth (NPO) for 14

days to allow for healing of the colonic-cutaneous fistula, during which she received Total Parenteral Nutrition (TPN). A follow-up CT abdomen was performed on day 14 post-tube removal, which confirmed no further leakage of contrast from the gastric or colonic sites. After 14 days, the patient resumed nasogastric feeding. She was discharged in stable condition with continued nasogastric tube feeding.

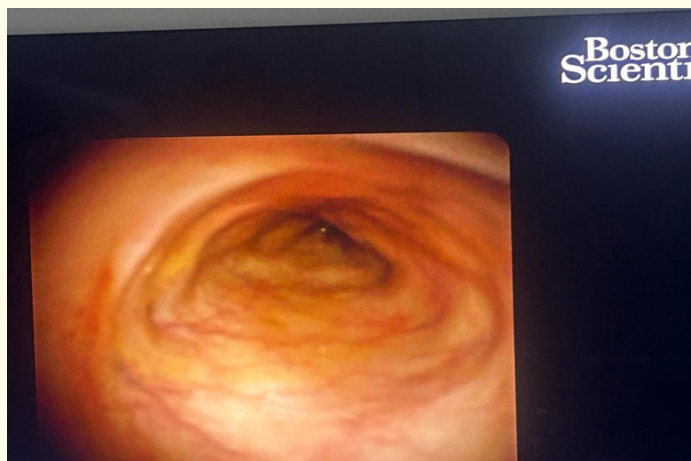


Figure a

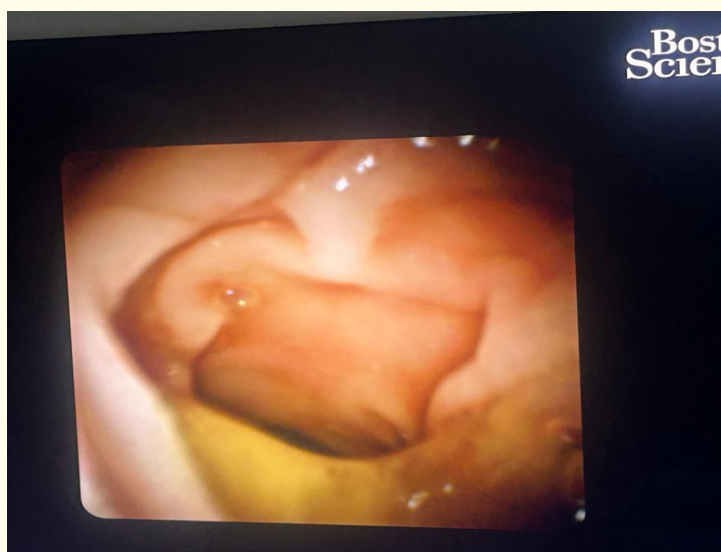


Figure b

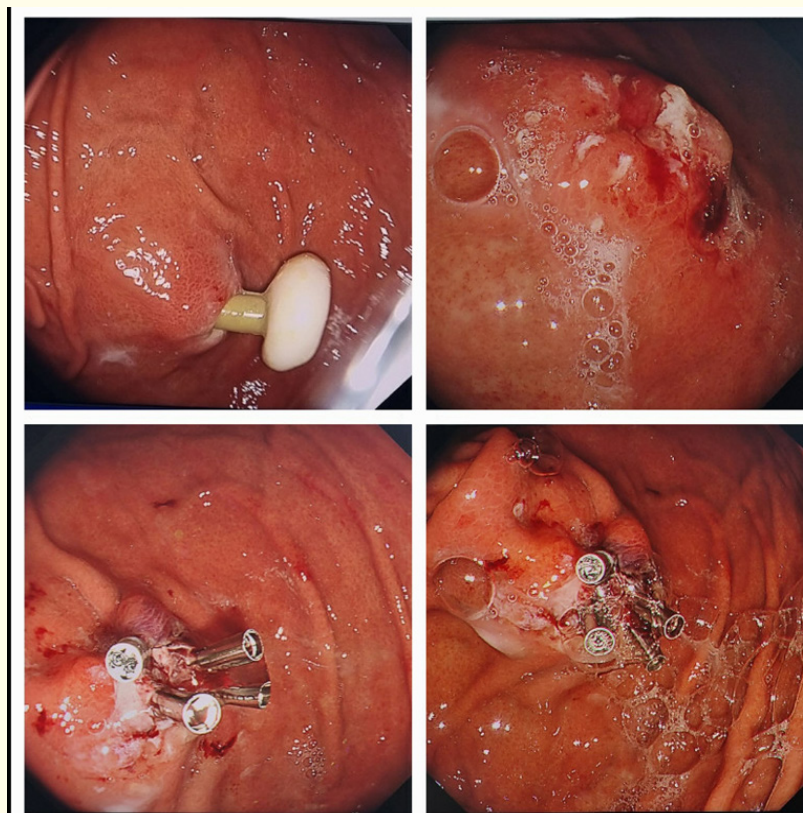


Figure c



Figure d



Figure e



Figure f

## Discussion and Conclusion

Percutaneous endoscopic gastrostomy (PEG) tube insertion is a widely used method for long-term enteral nutrition in patients unable to maintain adequate oral intake. While generally safe, PEG tubes are associated with complications that can be categorized into immediate, early, and late types [3]. Late complications such as fistula formation, including cutaneous-colonic fistulas, are rare but serious [4,5].

This case highlights an unusual complication where the PEG tube passed through the transverse colon, leading to a cutaneous-colonic fistula. The patient's presentation with brown-colored discharge from the stoma was an important clue, prompting further investigation with a contrast-enhanced CT scan. The scan confirmed the interposition of the colon and the presence of contrast leakage around the tube, indicating the fistula [6].

Endoscopic management was employed, with the PEG tube being removed and the gastric-colonic fistula closed using clips. Secondary healing of the cutaneous-colonic communication was achieved by leaving the wound to heal naturally after dressing. The patient was kept (NPO) for 14 days and supported with Total Parenteral Nutrition (TPN). Follow-up CT confirmed no further leakage, and after 14 days, nasogastric feeding was resumed.

This case underscores the importance of early detection and intervention in PEG-related complications. It also highlights the value of advanced imaging in diagnosing atypical complications and the potential for conservative management, such as endoscopic closure, to avoid more invasive surgery. Close follow-up is critical in patients with PEG tubes, especially those at increased risk for late complications [2,5].

## Bibliography

1. Gauderer MW., *et al.* "Gastrostomy tube placement: a percutaneous endoscopic technique". *Journal of Pediatric Surgery* 15.6 (1980): 872-875.
2. Dray X., *et al.* "Long-term complications of percutaneous endoscopic gastrostomy tube placement: a retrospective analysis of 202 patients". *Gastrointestinal Endoscopy* 52.6 (2013): 852-856.
3. Sidhu R., *et al.* "Gastrointestinal complications of percutaneous endoscopic gastrostomy (PEG) tube insertion: A systematic review". *Endoscopy* 42.3 (2010): 268-277.
4. Lee TH., *et al.* "Colonic perforation and fistula formation after percutaneous endoscopic gastrostomy: A case report and review of the literature". *Journal of Clinical Gastroenterology* 47.4 (2013): 375-378.
5. Kwon YJ., *et al.* "Endoscopic treatment of an anastomotic colonic fistula after percutaneous endoscopic gastrostomy placement". *World Journal of Gastrointestinal Endoscopy* 8.2 (2014): 213-218.
6. McClave SA and Sacks GS. "Role of imaging in the evaluation of patients with feeding tube complications". *Journal of Clinical Imaging Science* 3 (2013): 51.
7. Laurell H., *et al.* "Imaging of gastrointestinal complications of percutaneous endoscopic gastrostomy". *Journal of Gastroenterology and Hepatology* 24.2 (2009): 177-181.
8. Palleri E., *et al.* "Endoscopic management of gastrointestinal fistulas". *Digestive Diseases and Sciences* 57.5 (2012): 1253-1261.
9. Sharma VK., *et al.* "Endoscopic closure of gastrocolic fistula using endoscopic clips: A case series". *Endoscopy* 46.2 (2014): 163-167.
10. Kirkpatrick J., *et al.* "Role of total parenteral nutrition in the management of gastrointestinal fistulas". *Clinical Nutrition* 23.4 (2004): 611-615.