Turk J Gastroenterol *2017; 28: 526-7*

False transfixation of the liver using an endoscopic gastrostomy tube: Do not always believe in radiologic images

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Cite this article as: Nunes G, Alves TR, Luz C, et al. False transfixation of the liver using a percutaneous endoscopy gastrostomy tube: Do not always believe in radiologic images. Turk J Gastroenterol 2017; 28: 526-7.

To the Editor,

Since the first reports, percutaneous endoscopic gastrostomy (PEG) is the preferred procedure for long-term enteral nutrition in children with persistent dysphagia (1). Although prolonged dysphagia is not a common condition in pediatrics, frequent indications for PEG in this setting include congenital or acquired neurological disorders, craniofacial abnormalities, severe malnutrition owing to oncologic diseases, and nutritional support in intensive care units (2). PEG is often considered a safe procedure with a low risk and rare mortality. A large multicenter survey revealed that the prevalence of early complications associated with PEG insertion is approximately 5% (3). In fact, early complications appear to be less than later ones (4). The authors describe a case with ultrasonography (US) and computed tomography (CT) images that seem to show a life-threatening PEG complication. Later, those images proved to be misleading but unfortunately resulted in a useless surgical procedure.

A 5-year-old boy with gait ataxia, facial palsy, and chronic headache, persisting for 6 months, was admitted to our hospital. Cranial magnetic resonance imaging (MRI) revealed a large brainstem tumor with 4.5 cm, causing intracranial hypertension and compressing adjacent brain structures. Surgical resection was performed, and histology revealed a pilocytic astrocytoma. Early after surgery, the patient developed dysphagia and a nasogastric tube was initially placed to initiate enteral nutrition. On postoperative day 38, persistent dysphagia was evident and endoscopic gastrostomy was performed. Two days after the procedure, abdominal distension was observed. Transparietal thickness between the internal and external bumpers, assessed through the PEG tube, increased from 1.5 to 6 cm, despite the external bumper being adjusted to the skin. Upper GI endoscopy was repeated, confirming the intragastric position of the internal bumper. Abdominal US and CT suggested liver transfixation by the PEG tube and revealed a 3.2-cm fluid collection surrounding the left liver lobe (Figure 1). Although the patient was clinically stable, the images that suggested liver injury were striking and emergence surgery was performed. During laparoscopic surgical exploration, the internal bumper was located inside the stomach; however, the PEG tube was freely moving through the gastric orifice, causing a mild intraperitoneal leakage. The tube contacted the surface of left liver love but did not penetrate the liver parenchyma. The stomach was further fixed to the abdominal wall with several surgical stitches, and no additional complications occurred (Figure 2). After the surgical intervention, the patient resumed enteral feeding through the PEG and was discharged.

Percutaneous endoscopic gastrostomy was first introduced in 1980, and despite its original description in children, it has become a popular method of artificial nutrition for all age groups (1). PEG is a safe procedure, and major early complications, including visceral perforation owing to interposition between the stomach and abdominal wall, severe bleeding, esophageal tear, and sepsis associated with skin and soft tissue infections, are unusual (2,3). After PEG, an iatrogenic pneumoperitone-

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Received: May 13, 2017 **Accepted:** July 27, 2017 **Available Online Date:** October 25, 2017
 • Available online at www.turkjgastroenterol.org • DOI: 10.5152/tjg.2017.17258

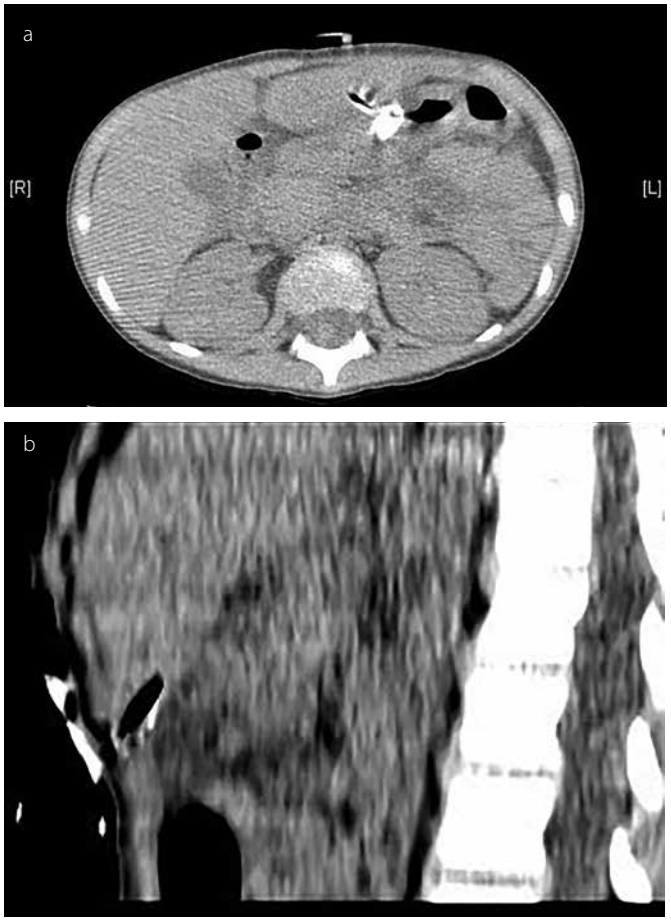

Figure 1. a,b. Axial (a) and sagittal (b) abdominal CT images that give the false impression of liver transfixation by the PEG tube, which appears to be passing through the left liver lobe

um is ordinary and spontaneously reabsorbed after few days. CT is sometimes prescribed to patients who present with some degrees of abdominal pain or distension after PEG. CT images can lead doctors who are not familiar with these procedures to misinterpret radiologic findings as false complications of the procedure, thereby performing wrong therapeutic interventions. This brief report describes a small gastrostomy leakage that was assessed using CT as a false transfixation of the liver by the PEG tube, a life-threatening complication that has never been reported in literature and that highlights the importance of evaluating clinical data over misleading images and the need for carefully interpreting radiologic studies in the early post-PEG period.

Peer-review: Externally peer-reviewed.

Author contributions: Concept - G.N., J.F.; Design - G.N., C.A.S., J.F.; Supervision - C.A.S., J.F.; Resource - T.R.A., C.L., I.V., L.C.; Materials - T.R.A., C.L., I.V. L.C.; Data Collection and/or Processing - G.N.; Analysis and/or Interpretation - G.N., T.R.A., C.L., I.V., L.C., C.A.S., J.F.; Literature Search - G.N.; Writing - G.N.; Critical Reviews - J.F.

Conflict of Interest: No conflict of interest was declared by the authors.

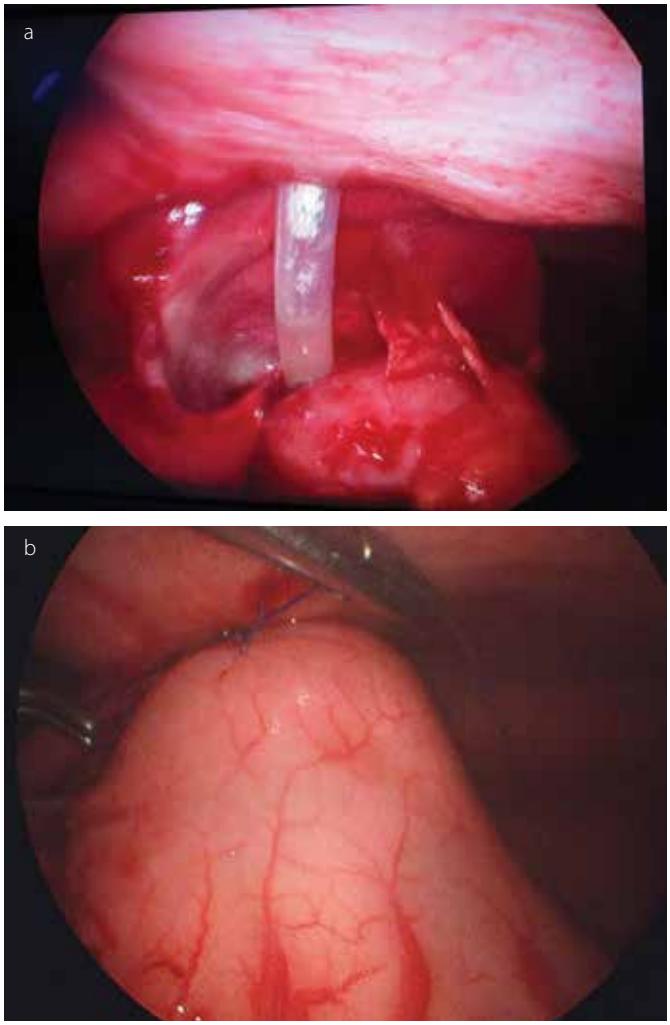

Figure 2. a,b. Images of laparoscopy exploration showing the PEG tube in contact with the intact left liver lobe and not transposing it (a). A large gastric wall orifice was observed leading to a small gastrostomy leakage. This orifice was narrowed, and the gastric wall was sutured to the anterior abdominal wall to prevent further tube dislodgment (b)

Financial Disclosure: The authors declared that this study has received no financial support.

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