A Rare Cause of Acute Pancreatitis: Gastrostomy Catheter Migration

Dear Editor

We wish to publish in this section the story of a child with acute pancreatitis.

Introduction: in pediatric cases suffering from chronic diseases, adequate nutrition is of utmost importance, as insufficient intake of nutrients will lead to starvation. For patients with neurologic syndromes and cerebral palsy, gastrostomy is often the preferred method for enteral nutrition. Intestinal tract access is realized either with a nasal tube or through the percutaneous route with a direct link to the stomach or jejunum. Nasogastric tubes are preferred for short-term nutritional needs of up to four weeks, but percutaneous gastrostomy is preferred for pediatric patients in need of long term tube feeding, since it is more comfortable, less disfiguring, and not as traumatic as nasogastric feeding. Endoscopic or radiological techniques are employed to obtain percutaneous access in order to prevent complications subsequent to gastrostomy; these can range from wound infection to hemorrhage, intestinal perforation, intra-abdominal organ access, and even necrotizing fasciitis and colocutaneous fistula.

Acute pancreatitis caused by tube migration following percutaneous gastrostomy is very rare. The relevant literature includes instances of complications related to gastric outlet obstruction, again rare, in senile or adult patients.[1-5] Therefore, the emergence of pancreatic episodes in pediatric cases is extremely rare. The aim of the present manuscript is to evaluate the clinical findings of a pediatric patient with gastrostomy who experienced a pancreatitis attack.

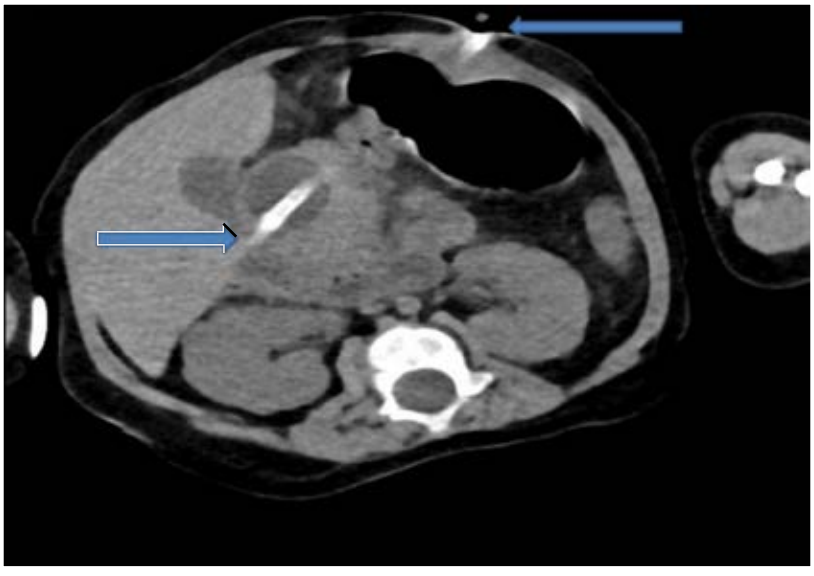
CASE

A 21-month-old boy, who had been diagnosed with Meckel Gruber Syndrome, was admitted to our hospital with bilious drainage from a gastrostomy. The baby underwent surgery for an encephalocele and had chronic renal failure due to polycystic renal disease. His blood serum laboratory report showed elevated serum ALT(298U/L), AST(636U/L), and GGT(1243U/L) levels, with extremely high serum amylase(640U/L)and lipase (890U/L) levels. An abdominal computerized tomography image showed that the Foley gastrostomy catheter was near the choledoch, passing the pylorus and pulling duodenal bulb towards the antrum (*Figure 1*). Subsequent to catheter removal, serum pancreatic enzyme levels decreased dramatically.

DISCUSSION

In cases requiring long term nutritional support of more than four-six weeks, the standard for enteral nutrition is now percutaneous endoscopic gastrostomy (PEG) tube placement. This is a safe method that can be applied easily, so it is especially preferred in oropharyngeal

FIGURE 1. *The Foley gastrostomy catheter was near choledoch identified passing the pylorus and pulling duodenal bulb towards the antrum on computerise tomography*



dysphagia cases and in cases with impaired swallowing functions due to neurological reasons.

A rare complication is PEG-driven gastric outlet tract obstruction, caused most frequently by the passage of the PEG tube from the stomach into the duodenum and resulting in partial or total obstruction at that level. Migration of the balloon to the pylorus, duodenum, and proximal jejunum occurs more readily and can lead to obstructions at those levels.[6,7] In the case described here, the clinical condition emerged subsequent to PEG tube replacement with a balloon Foley catheter. The literature describes case reports related to the emergence of pancreatitis from duodenal obstruction due to a similar balloon occlusion at the ampulla of Vater level.[8,9] Although quite rare, this can present in the form of acute pancreatitis caused either by ampullary obstruction at the second part of the duodenum or by pancreatic head compression and a resulting obstructive pancreatic obiliary disease.[8,10] Nonspecific symptoms are nausea, vomiting, and epigastric pain, accompanied by laboratory results showing elevated pancreatic and liver-associated enzymes. Pancreatic inflammation, with or without dilated biliary and pancreatic ducts, are consistent with obstruction in the images obtained.

The present case highlights the importance of correct gastrostomy tube placement and of provision of the education necessary for caregivers of the PEG site to ensure unproblematic tube placement. Complications, such as those in the present case, can emerge if the PEG is inserted in the distal antrum, close to the pylorus. However, they can be avoided if the PEG is carefully inserted proximal to the antrum and pyloric canal on the greater curve. Upper gastrointestinal system endoscopy can easily confirm the diagnosis. Under endoscopic control, relaxation is achieved subsequent to balloon deflation and withdrawal back to the stomach.

CONCLUSION

Pediatric cases who undergo ballooned PEG tube insertion should be considered at risk for obstructive symptoms and should undergo an endoscopic check. Informing patients and patients' relatives properly and thoroughly about the use and follow-up of the PEG tube, and especially the control of the external fixation buffer section, may prevent the emergence of this condition. As in the present case, the use of a Foley catheter as a gastrostomy catheter, without fixation to the skin, can cause a blockage of the outlet of the ampulla of Vater by the inflated valve that passes the stomach and antrum. The end result, although rare, can be pancreatitis. ■

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