

## C23

### **Duodenoduodenal intussusception due to a migrated percutaneous radiologic gastrostomy tube in ALS**

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#### **Introduction**

Malnutrition is a well-known prognostic factor associated with survival in amyotrophic lateral sclerosis (ALS). Hence, nutritional support via percutaneous gastrostomy tube placement in ALS patients is indispensable to prolong survival and improve quality of life. We report an extremely rare but fatal case of duodenal intussusception caused by a migrated percutaneous radiologic gastrostomy (PRG) tube in an ALS.

#### **Case Report**

A 45-year-old woman was diagnosed with ALS in September 2012 at another hospital. Her swallowing difficulty progressed gradually; PRG was performed in August 2015. In November 2015, she first visited our hospital. Swallowing tests were conducted; small amounts of soft/liquid diet could be consumed without aspiration. She performed both tubal feeding and oral diet. Since October 2016, only oral diet was followed and the PRG tube was unused. Tube removal was recommended, but the caregiver refused to visit the hospital due to difficulty in patient transport. Epigastric pain started a month before admission to the emergency department (ED) and aggravated 2 weeks prior with nausea and anorexia. At ED admission, abdominal tenderness was not prominent, but severe epigastric discomfort with abdominal distention and infection signs such as tachycardia (HR 120~130 bpm) and severe leukocytosis (WBC 30.32 10E3/uL) were observed. A computed tomography (CT) scan of the abdomen and pelvis demonstrated abnormal gastric distention due to duodenal intussusception. The PRG tube end had migrated to the second portion of the duodenum (Fig. 1). We decided to remove the PRG tube and reduce intussusception using the air reduction maneuver under radiologic guidance. Although there was some difficulty in removing the tube due to the adhesion, tube removal and air reduction were successfully completed under fluoroscopic guidance by an interventional radiologist (Fig. 2). Five days later, a follow-up CT scan revealed complete tube removal without complications. Subsequently, the patient could feed orally and was discharged 10 days after hospitalization.

#### **Discussion**

Two gastrostomy tube placement types are known: percutaneous endoscopic gastrostomy (PEG) and PRG. Several studies demonstrate that PRG (sedation not required) has a higher success rate and lower complication rate in ALS patients. PEG is usually performed using a tube with a balloon or mushroom catheter tip, but in PRG, a cope loop gastrostomy tube is often used, which does not have a device like that. In our case, intussusception was caused by the non-balloon-type tube. Intussusception can occur regardless of tube type. Migration is the most important cause of intussusception. As in this patient, if the tube is left unused for long, external site management is neglected and

considerable time passes after migration. Gastrostomy tubes should be removed immediately if unused, but if immediate removal is difficult, as in this patient, external site care is vital.

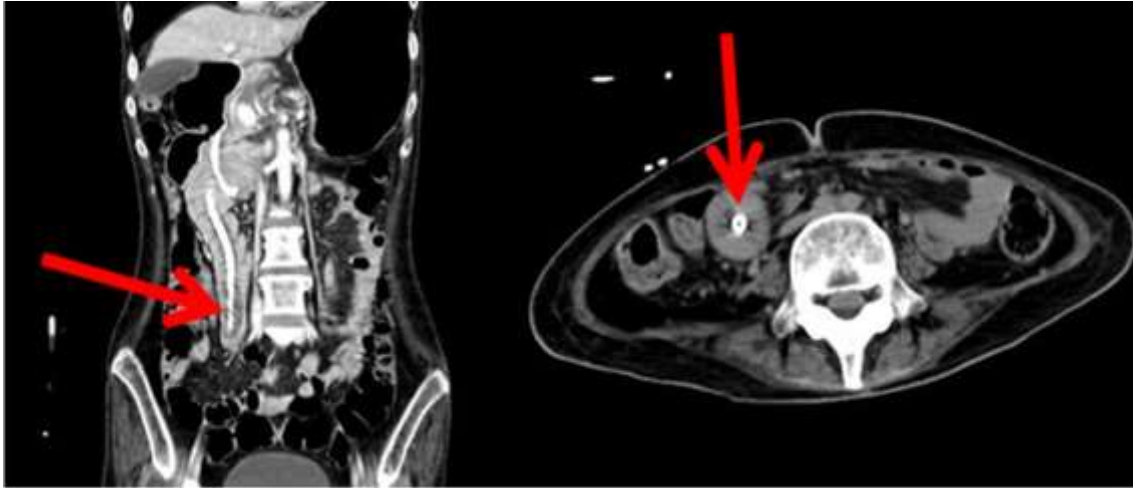


Fig 1. CT abdomen images of duodenal intussusception by the PRG tube



Fig 2. Fluoroscopy-guided gastrostomy tube removal procedure and the tip of the PRG tube