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Case Report

Healing One Acute Pancreatitis Patient with the Duodenal Perforation Caused by a Nutritional Tube Misplacement

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Abstract

Enteral nutrition support of Acute Pancreatitis (AP) patients via a Nasojejunal Feeding Tube (NJT) is a conventional and rational treatment. The nutritional tube placement accurately is of vital important. Generally, complications of NJT placement are uncommon. A 47-year-old female AP patient was admitted to our ICU. An abdominal X-ray showed that an NJT was in the duodenum drop. And there was an abnormal air pattern in the end of the NJT. A CT scan revealed the retroperitoneal air in the end of the NJT as well as the injection of pan shadow meglumine contrast through gastric tube leakage into jejunum, suggesting a duodenal perforation. Therefore, we placed a new jejunum nutrition tube under gastroscope. One month later CT scan showed that there was no leakage into the original considered duodenal perforation through oral contrast agent. One week later the jejunum nutrition tube was pulled out.

Keywords: Enteral Nutrition Acute Pancreatitis; Gastroscope; Nasojejunal Feeding Tube

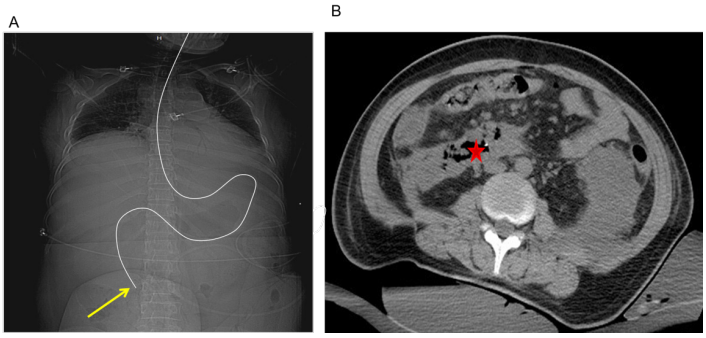
Introduction

Acute Pancreatitis (AP) has high mortality and morbidity [1]. Nutrition support of AP patients via a Nasojejunal Feeding Tube (NJT) is a conventional and rational treatment [2]. The methods of nutritional tube placement are including surgery retention, bedside blind placement, fluoroscopic, endoscopic assistance [3-5]. Generally, complications of NJT placement, such as duodenal perforation, hydrothorax and retroperitoneal emphysema, are uncommon [6,7]. Here, we report and healed one AP patient with the duodenal perforation caused by a nutritional tube placement.

Case Report

A 47-year-old woman without past history was admitted to a local hospital for abdominal pain after eating greasy food, accompanied by nausea and vomiting. She was diagnosed as Severe Acute Pancreatitis (SAP). The treatment measures were fluid resuscitation, fasting water, suppressing acid and enzyme. A week later, she was in a stable condition. Enteral nutrition was implemented through placing a nasoduodenal feeding tube guided by an abdominal X-ray. One day after operation, the abdominal pain aggravated accompanied by nausea, vomiting and fever. So, the doctor in the local hospital stopped enteral nutrition and treated with intravenous nutrition. After one week the patient was transferred to our hospital. The main symptoms and signs at admission were increased temperature, abdominal distension, epigastric tenderness, rebound tenderness, weak borborygmus, bladder pressure 14 mmHg, increased PCT and CRP, ascitic fluid. The first day admitted to our ICU, an abdominal X-ray showed that a nasoduodenal feeding tube (arrow) was in the bduodenum drop and did not reach the distal ligament of Treitz (Figure 1A). And there was an abnormal air pattern (star) in the end of the nasoduodenal feeding tube (Figure 1B). The possible reason was considered that the air was caused by retroperitoneal pancreatic necrotic tissue secondary infection or duodenal perforation. A Computerized Tomography (CT) scan of the abdomen revealed the retroperitoneal air in the end of the nasoduodenal feeding tube as well as the injection of pan shadow meglumine contrast (arrow) through gastric tube leakage into jejunum (Figure 2), suggesting a duodenal perforation. Considering the medical history, the reason of the duodenal perforation resulted from the placement of the jejunum nutrition tube containing metal thread in the local hospital. So, we decided to place a new jejunum nutrition tube (blue arrow) under gastroscope. The process was successful and CT scan showed the place was well (Figure 3). Through active enteral nutrition implementing and treatment with somatostatin ten days, the patient recovered well. One month later CT scan showed that there was no leakage into the original considered duodenal perforation through oral contrast agent, suggesting the intestinal fistula healed completely. So,

our doctor told the patient to eat through the mouth. One week later the jejunum nutrition tube was pulled out and the patient had no fever and abdominal pain. Two months of follow up after hospital discharge, the patient has returned to normal with no discomfort. This patient bounced back nicely.



Figures 1(A,B): The X-ray and CT of the first day admitted to ICU. The X-ray showed that a nasoduodenal feeding tube (arrow) was in the bduodenum drop and did not reach the distal ligament of Treitz (**1A**). There was an abnormal air pattern (star) in the end of the nasoduodenal feeding tube (**1B).**

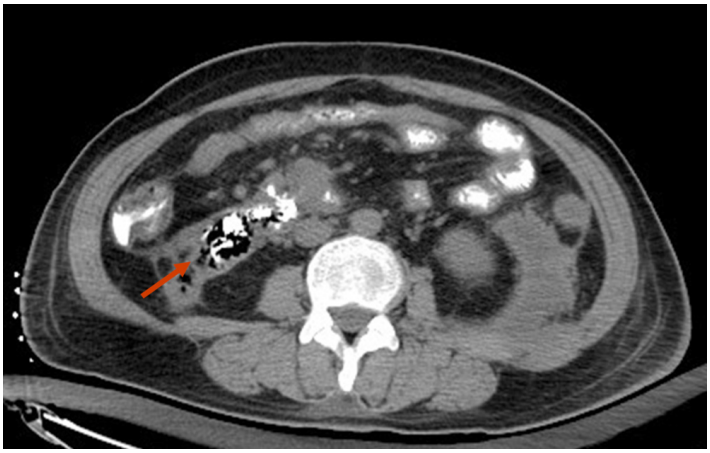


Figure 2: A CT scan revealed there was pan shadow meglumine contrast (arrow) leakage into jejunum.

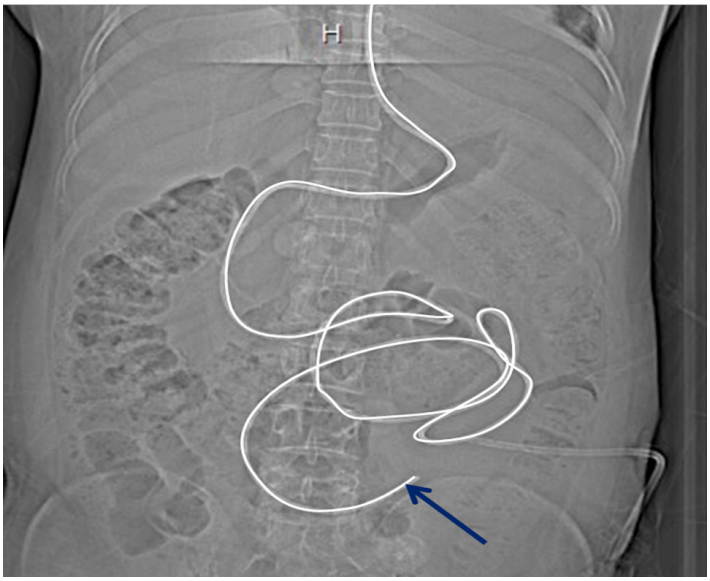


Figure 3: A CT scan showed the position of the nasoduodenal feeding tube (arrow) was well.

Discussion

Enteral nutrition support of AP patients via an NJT is a conventional and rational treatment. The nutritional tube placement accurately is of vital important. Avoid complications of NJT placement is very vital. Gastroscopic NJT placement is a simple and effective method. Here we placed a new jejunum nutrition tube under gastroscope. The process was successful and CT scan showed the place was well. When NJT is placed using gastroscopic techniques, the final position must be depending on an abdominal radiography and interpreted by the attending radiologist. Accurate intubation with the help of gastroscope can avoid complications.

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