

EUS Guided Cyst Gastrostomy for Treatment of a Pancreatic Pseudocyst Extending into the Mediastinum Resulting in Acute Respiratory Failure

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Introduction

- Mediastinal pseudocysts are the result of a rare drainage tract formation that develops more often in patients with a history of alcohol related chronic pancreatitis. They can occur when pancreatic fluid collections extend through the esophageal hiatus into the mediastinum and may be associated with a pleural effusion.
- The current evidence suggests favorable outcomes using endoscopic transmural drainage in the management of pancreatic pseudocysts.
- Here, we present a challenging approach to an unusual complication of a pancreatic pseudocyst extending into the mediastinum using EUS guided creation of a cyst gastrostomy.

Case Description

- A 50-year-old female with a history of alcohol related chronic pancreatitis presented to our hospital in severe respiratory distress requiring intubation for acute hypoxemic respiratory failure.
- A CT scan demonstrated a pseudocyst extending through the esophageal hiatus into the mediastinum and right lower lung where it measured 69.7mm (Fig 1A).
- Multidisciplinary consensus between gastroenterology and interventional radiology was to proceed with EUS assisted creation of a cyst gastrostomy with placement of a metal stent.
- A curvilinear echoendoscope was passed and advanced into the proximal stomach. Here, a 55mm anechoic cystic cavity with layering debris was brought into stable view (Fig 2A). Using standard endo cut settings, a 10mm x 10mm lumen apposing axios metal stent was successfully placed using a cauterized technique (Fig 2B). The echoendoscope was then exchanged for the gastroscope and the stent was seen to be in good position draining cystic fluid.

Images

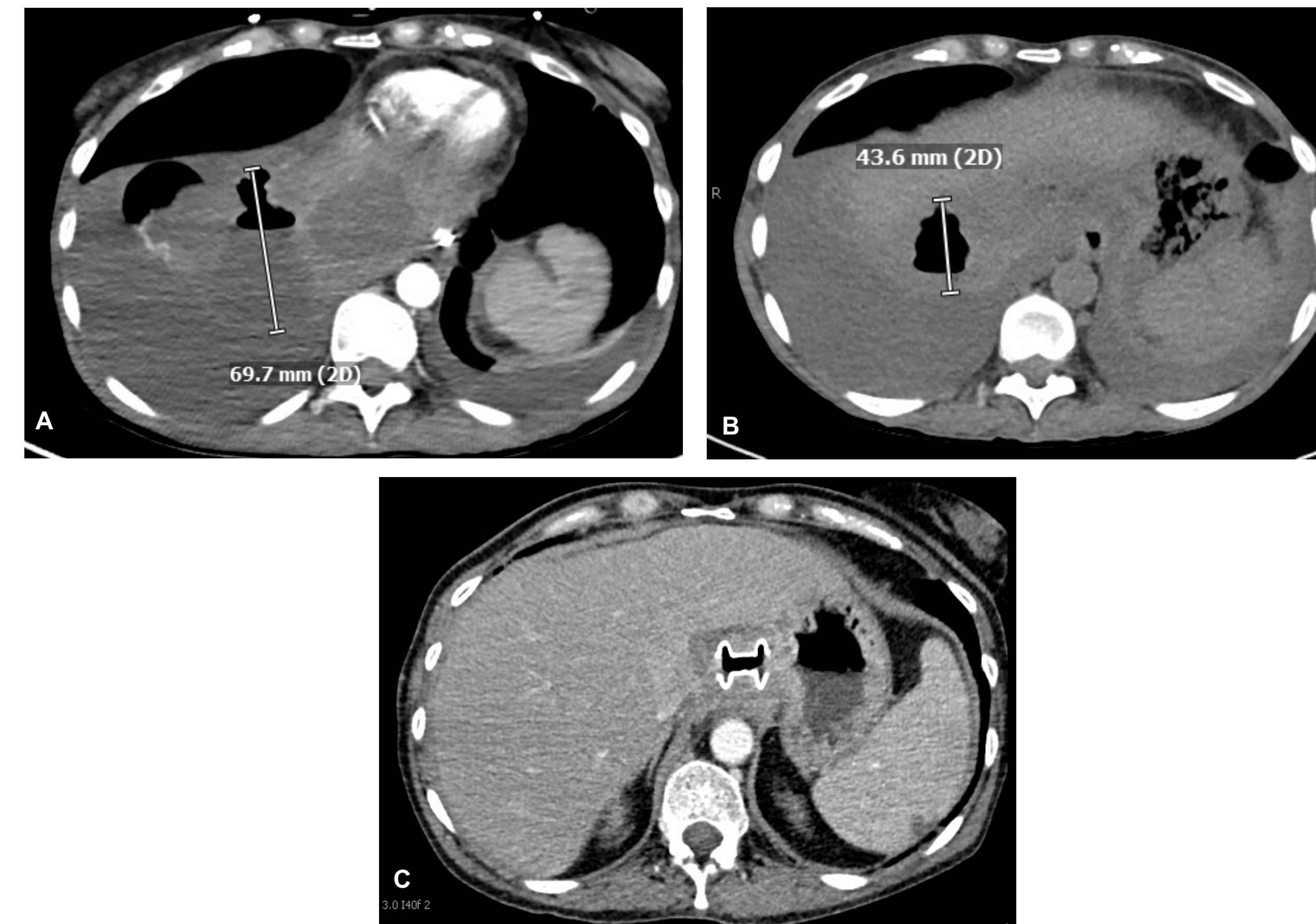


Figure 1: A. CT scan demonstrating a pseudocyst extending through the esophageal hiatus into the mediastinum and right lower lung. B. CT scan showing the stent extending from the proximal stomach to the pseudocyst, which had decreased in size. C. CT scan demonstrating interval resolution of the pseudocyst.

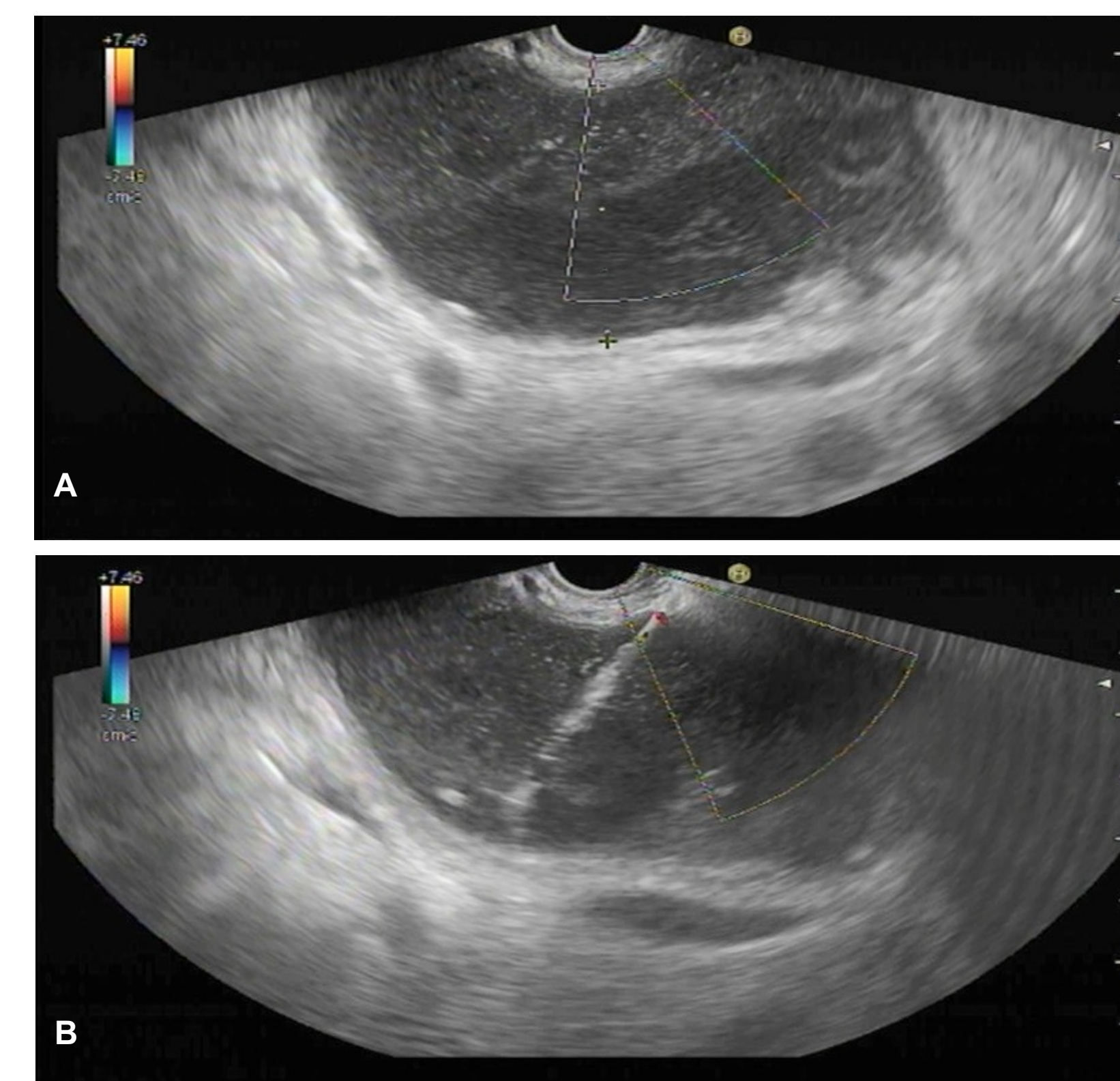


Figure 2: A. EUS showing a 55mm anechoic cystic cavity with layering debris. B. EUS demonstrating the deployment of a 10mm x 10mm lumen apposing axios metal stent.

Case Continued

- Four days after the procedure, a CT scan showed the stent extending from the proximal stomach to the pseudocyst, which had decreased in size from 69.7mm to 43.6mm (Fig 1B).
- One week following the initial procedure, the patient underwent upper endoscopy, which showed the lumen-apposing metal stent in the cardia along with an empty cavity and scant fluid drainage when suction was applied through the stent.
- A CT scan performed 8 weeks later showed complete resolution of the pseudocyst (Fig 2C). The patient then underwent upper endoscopy with EUS, which confirmed resolution of the pseudocyst and the stent was removed using rat tooth forceps.

Discussion

- In this case, we have demonstrated the utility of EUS in the creation of a cyst gastrostomy to successfully treat a patient with acute respiratory failure secondary to pancreatic pseudocyst extension into the mediastinum and right lower lung.
- Further studies are needed to evaluate for pseudocyst recurrence following this procedure to determine its long-term efficacy in the management of mediastinal pseudocysts.

References

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