

## Case Report

# Dysphagia Relieved by Endoscopic Transpapillary Pancreatic Duct Stent Placement!

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**ABSTRACT** Pancreatic fluid collections are usually peripancreatic in location but can be found at various atypical locations such as the mediastinum. Mediastinal pseudocysts are very rare and are very unusual cause of dysphagia. Here, we report a rare case of mediastinal pseudocyst occurring because of pancreatic duct disruption due to chronic pancreatitis and presenting as dysphagia and successfully treated with endoscopic transpapillary stent placement.

**KEYWORDS:** *Chronic pancreatitis, endosonography, pseudocyst, stent*

## INTRODUCTION

Pancreatic fluid collections are usually peripancreatic in location but can be found at various atypical locations such as the mediastinum.<sup>[1]</sup> Despite their location in the mediastinum around the esophagus, dysphagia is a rare presenting symptom and is usually because of compression of the esophagus by large mediastinal pseudocyst.<sup>[1]</sup> Here, we report a rare case of mediastinal pseudocyst occurring because of pancreatic duct disruption due to chronic pancreatitis. The patient presented with dysphagia and was successfully treated with endoscopic transpapillary stent placement.

## CASE REPORT

A 29-year-old male patient presented with intermittent dysphagia to solids and episodic abdominal pain of 6 weeks duration. He denied history of heartburn or ingestion of corrosive nor did he smoke or consume alcohol. The clinical examination was unremarkable. Gastroscopy revealed mild luminal narrowing in the lower end of esophagus with normal mucosa. Contrast-enhanced computed tomography (CECT) of the chest revealed minimal left-sided pleural effusion [Figure 1; white arrows], and thickening of lower end of esophagus with luminal narrowing [Figure 2]. Also observed were collapse consolidation of left lower lobe of the lung [Figure 2; white arrows] and multiple cystic lesions in the posterior mediastinum [Figure 2; black arrows]. Radial endoscopic ultrasound (EUS) revealed marked thickening of the lower esophageal wall

with loss of wall stratification [Figure 3] and multiple cystic lesions in the posterior mediastinum around the esophagus [Figure 4]. Because of luminal narrowing echoendoscope could not be negotiated into the stomach. Ultrasound-guided diagnostic thoracentesis was done, and 15 ml of hemorrhagic pleural fluid was aspirated.

The pleural effusion was exudative with markedly elevated fluid amylase (>100,000 U/l). Serum amylase (380 U/l; N < 100 U/l) and lipase (230 U/l; N < 60 U/l) were also elevated. CECT of abdomen revealed dilated pancreatic duct [Figure 5; black arrows] and ductal calculi [Figure 5; white arrow]. Furthermore, a peripancreatic collection measuring 3.2 cm was noted. On magnetic resonance imaging, a fistulous tract tracking upward from the intra-abdominal collection toward the posterior mediastinum was noted [Figure 6; arrows]. Patient's serum calcium, parathormone, and lipid profile were normal, and there was no family history of either acute or chronic pancreatitis. The patient was diagnosed as a case of idiopathic chronic pancreatitis with multiple mediastinal pseudocysts and left-sided pancreatic pleural effusion.

Endoscopic retrograde pancreatography revealed dilated main pancreatic duct along with disruption at the tail end [Figure 7; white arrows]. The contrast

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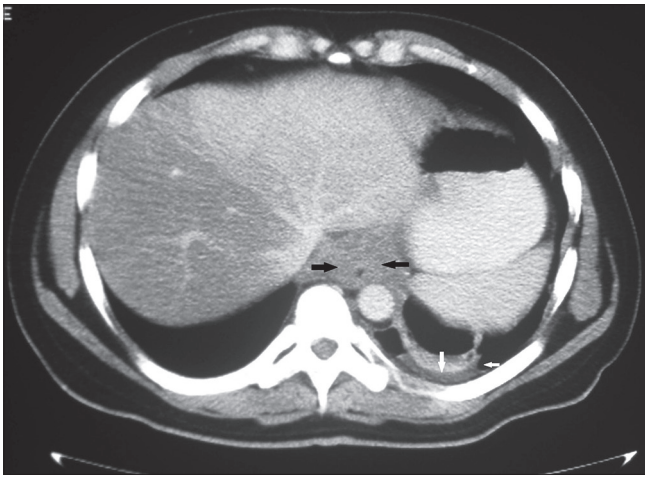
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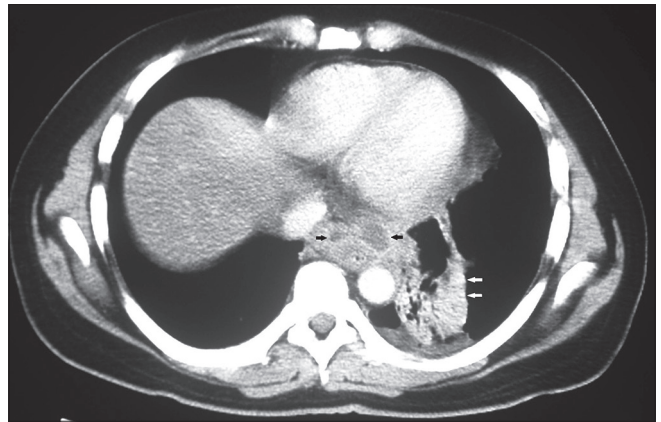


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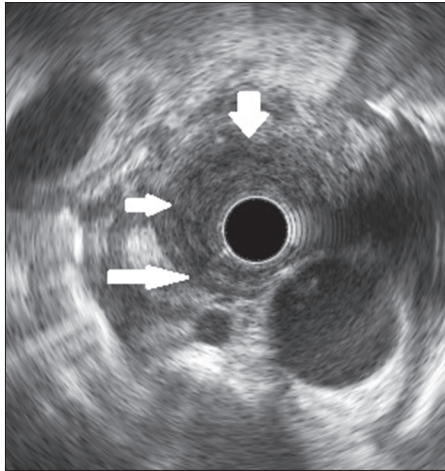
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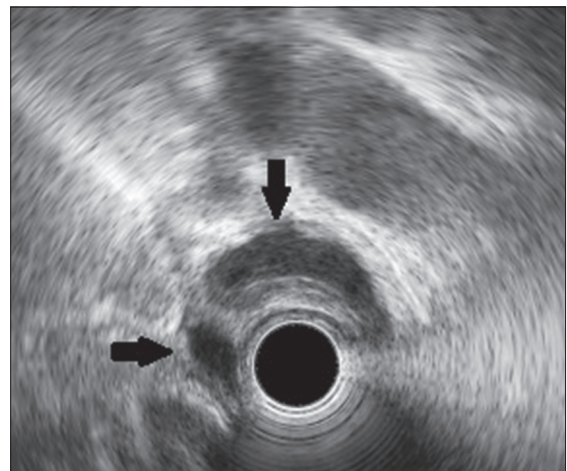
**Figure 1:** Contrast-enhanced computed tomography: Minimal left-sided pleural effusion



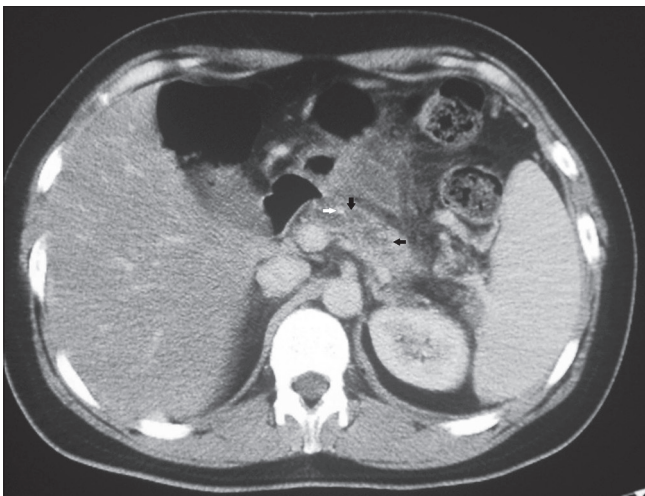
**Figure 2:** Contrast-enhanced computed tomography: Thickening of lower end of esophagus with luminal narrowing along with collapse consolidation of the left lower lobe of lung (white arrows) and multiple cystic lesions in the posterior mediastinum (black arrows)



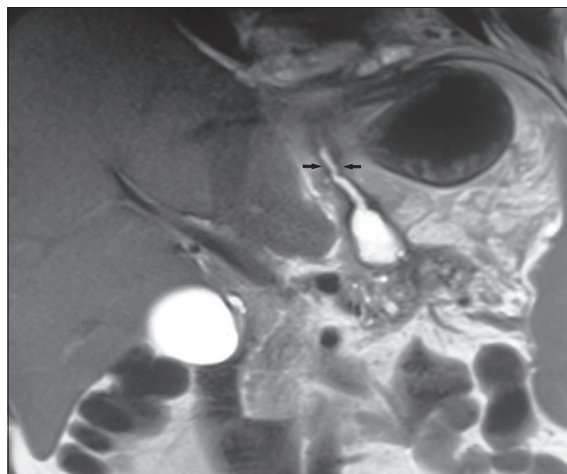
**Figure 3:** Endoscopic ultrasound: Marked thickening of lower esophageal wall with loss of wall stratification



**Figure 4:** Endoscopic ultrasound: Multiple cystic lesions in the posterior mediastinum around the esophagus



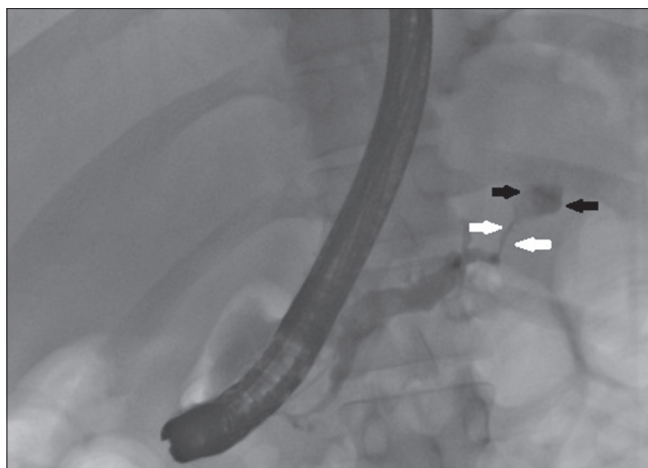
**Figure 5:** Contrast enhanced computed tomography of abdomen: Dilated pancreatic duct [Figure 5] and ductal calculi (white arrow). Also, a peripancreatic collection noted



**Figure 6:** Magnetic resonance imaging: Fistulous tract tracking upward from intra-abdominal collection toward posterior mediastinum (arrows)

was seen filling the peripancreatic collection [Figure 7; black arrows]. Repeated attempts to cross

the disruption failed; and therefore, after a pancreatic sphincterotomy, a 7 Fr 9 cm straight plastic stent was



**Figure 7:** Endoscopic retrograde pancreatography: Dilated main pancreatic duct along with disruption at the tail end (white arrows). The contrast is seen filling peripancreatic collection (black arrows)

placed in the pancreatic duct with distal end just at the mouth of the disruption. Following this, the patient had marked improvement in his symptoms and was able to swallow solids also. At 6-month follow-up, the patient is asymptomatic.

## DISCUSSION

Mediastinal pseudocysts are very rare and are very unusual cause of dysphagia.<sup>[1]</sup> They occur because of pancreatic juice tracking upward from posterior pancreatic duct disruption across one of the natural openings in the diaphragm.<sup>[1]</sup> These pseudocysts usually rupture into the pleural space leading on to pancreatic pleural effusion.<sup>[1,2]</sup> Despite their location around the esophagus, dysphagia is very rare in mediastinal pseudocysts and is usually seen because of compression by large pseudocysts.<sup>[1]</sup> In the index case, dysphagia was because of inflammatory esophageal wall thickening, as demonstrated by EUS. Such esophageal wall thickening has been previously reported after healing

of mediastinal pseudocysts.<sup>[3]</sup> Endoscopic transpapillary as well as transmural drainage has been reported to be a safe and effective treatment modality for mediastinal pseudocysts.<sup>[1,2]</sup> The transpapillary drainage leads on to healing of ductal disruption by traversing the high resistance pancreatic sphincter, thus leading on to preferential flow through the transpapillary stent. In conclusion, dysphagia due to the involvement of esophagus by the inflammatory process of pancreatitis consequent to pancreatic duct disruption is very rare, and it seems that endoscopic transpapillary stent placement is a safe and effective treatment for the same.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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## Conflicts of interest

There are no conflicts of interest.

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