A Case Series of Successful Endoscopic Management of Pancreatic Pseudocysts after Failed Surgical Drainage

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Case Series

Pseudocysts (PCs) of the pancreas are the most common lesion of the pancreas. PCs are a localized collection of fluid within the pancreas, which usually contain large quantities of amylase. Typically the PCs form from repeated bouts of pancreatitis, trauma, or pancreatic duct obstruction. In the last few decades, there has been an evolution of management and treatment of PCs. Initially a surgical approach was the mainstay of treatment with a fairly recent shift to endoscopic cystogastrostomy (CGY). Current practices recommend that the first line approach to the management of pancreatic PCs be endoscopic with surgery reserved for complicated necrotic PCs which are not amenable to endoscopic drainage.

The 4 cases described here all had pancreatic PCs which were initially treated with surgical CGY of the PC. On follow-up, all PCs were persistent or recurred and a GI consultation was called for endoscopic CGY. Endoscopic transgastric pseudocyst drainage with transmural stenting was successfully performed in all 4 cases with complete resolution of the PCs. The first case is a 48 year old male who developed a 10x10cm PC following a bout of acute pancreatitis. The patient underwent endoscopic CGY and remained treated after 12 months without recurrence or re-accumulation of the PC. In the second case, a 67 year old male, with a history of alcoholic pancreatitis developed a 11x10cm PC which was successfully treated with no recurrence of the PC at 8 month follow-up. In the third case, a 14 year old boy/s/p blunt abdominal trauma had a 10x12cm PC successfully managed endoscopically without recurrence of the PC at 36 months. The final case is a 37 year old male with alcoholic pancreatitis and a symptomatic 4x4.5cm PC that was successfully treated endoscopically without recurrence at 12 months.

Despite current literature suggesting surgical management of pancreatic pseudocysts as the “gold standard,” endoscopic therapy via endoscopic ultrasound guided transmural pseudocyst drainage is emerging as the method of choice due to its minimally invasive approach and safety and success profile when compared to surgery. The rate of resolution of PCs following endoscopic drainage range from 65-89% with no mortality reported to date. The most common complications being: infection (≤50%), bleeding, and perforation (<3%). Additionally, endoscopic management allows for transpapillary stenting which may be needed if pancreatic duct disruption is a suspected etiology of pseudocyst formation. Surgical management of PCs is much more invasive and associated with higher morbidity; therefore, we suggest that surgical management be reserved for cases which are not amenable to endoscopic CGY.

Background

* Pancreatic pseudocysts (PPC) are one of the most common pancreatic lesions. Chronic pancreatitis secondary to alcoholism is one of the most common causes of PPC.

* >40% of PPC can resolve on their own without intervention.

* Expansion of pseudocysts can produce abdominal pain, duodenal or biliary obstruction, vascular occlusion, or fistula formation into adjacent viscera, the pleural space or pericardium leading to the need for treatment.

* The past management of PPC was surgical but over the last several years EUS guided PPC drainage has been evolving as a new and less invasive method to manage PPC.

Discussion

* >40% of pseudocysts resolve without intervention; if resolution fails, therapy may be warranted to prevent development of spontaneous infection.

* EUS-guided cyst-gastrostomy significantly decreases length of hospital stay (2.65 vs 6.5 days) when compared to surgery (P=0.008).

* EUS-guided cyst-gastrostomy significantly decreases the average cost of management of PPC when compared to surgery ($9077 vs $14,815, P=0.01).

Conclusion

* EUS drainage of PPC has been showing to be an ever advancing method of successfully treating PPC in a less invasive manner than surgery.

* Mortality rates are from 0-8% for surgical management, compared to no reported deaths using EUS guided cyst-gastrostomy.

* Despite the current literature we propose that surgical management of PPC be reserved for candidates not amendable to endoscopic drainage as EUS management is less invasive and carries far fewer complications and morbidities.

References


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