Japanese Journal of Gastroenterology and Hepatology

Case Report

Excision of a Giant Huge Idiopathic Pseudo-Pancreatic Cyst: A Case Report

Ashraf A[1*], Shetiwy M[2], and Fathy MY[3]

[1]Department of Surgery, Mansoura University, Egypt

[2]Department of Surgery, Lecturer of Surgical Oncology, Mansoura University, Egypt

[3]Department of Surgery, Consultant of Anesthesia, El Mahalla Hepatology, Educational Center, Egypt

Received: 27 Dec 2019

Accepted: 05 Jan 2020

Published: 07 Jan 2020

***Corresponding author:**

Ashraf E. Abbas, Department of Surgery, Mansoura University Hospital, Egypt, E-Mail:ashrafabbaas@hotmail.com

1. Introduction

A pseudo-pancreatic cyst is a common clinical entity characterized by a fibrous tissue wall which is devoid of epithelium with localized fluid rich in pancreatic enzymes as amylase [1]. Its incidence reaches 30-40% after pancreatitis [1, 2], decompression is indicated when symptomatic cysts persist for more than six weeks and for those larger than six centimeters [3].

A classification of pancreatic pseudocyst was described by D'Egidio and Schein, in 1991, with three types according to inflammatory process, pancreatic duct anatomy, and cyst communication to the ductal system [4]. Another more complex classification of seven categories based on pancreatic duct anatomy, is suggested by Nealon and Walser 2002 [5]. Long-standing and large-sized cysts are more likely to have complications. Those patients need surgical intervention [6]. Cysto-gastrostomy is the standard drainage procedure via laparotomy [7], however minimal access techniques as radiological guided, endoscopic or laparoscopic drainage can reduce the morbidity of laparotomy [8]. When the surgeon is not certain that the cystic mass is a pseudocyst of the pancreas drainage is considered as contraindication [9].

2. Case Report

A 35 years old male, 180 cm height and 152 Kg weight with a BMI of 46.9 kg/m^2 was presented to the clinic for bariatric surgery advice, he denied any gastrointestinal symptoms and his history was negative for smoking, alcohol, or any other medication. Clinical examination was free apart from dullness over all most of abdomen with negative shifting dullness. Laboratory assessment was unremarkable, but U.S of the abdomen showed large cyst extended from left lumbar area to right iliac region crossing the mid line and extending to epigastrium and abutting the inferior surface of the spleen, further CT assessment of the abdomen and pelvis showed the huge sized cyst with dimensions of (28.5 x 20 x 18 cm), and calculating a volume of more than 10260 ml of fluid, but free biliary pancreatic system. Aspiration was not preferred by the surgical team and sudden ruptured with subsequent hemodynamic changes was frightened. After informed written consent, the patient was explored via a large transverse supraumbilical incision, good mobilization of sigmoid and left colon and a meticulous blunt and sharp dissection used for separating the cyst from mesentery of left colon and inferior and superior mesenteric vessels and after exposure and identification of left kidney and ureter, continue the dissection until separating the cyst wall from the pancreas bit by bit using silk 2/0 stitches, lastly, separating the end thickened area closely non separable from the tail of pancreas at splenic hilum using GI stapler with complete cyst excision see (Figure 3).

Pathological examination revealed a pseudo-pancreatic cyst, with remnant of some pancreatic tissue; fluid analysis confirms high level of amylase.

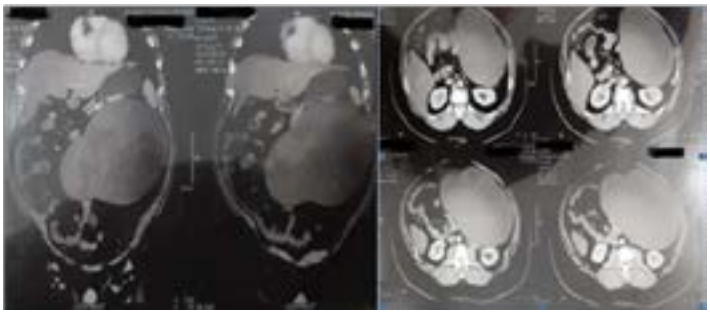

Figure 1: CT preoperative of the huge cyst

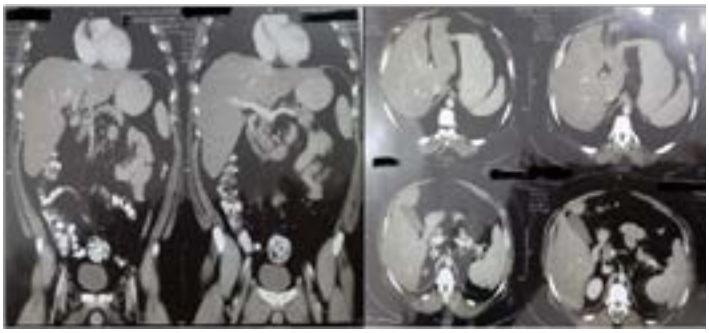

Figure 2: CT of follow up after more than one year

Figure 3: intraoperative exposure and complete excision.

3. Discussion

Giant pseudocysts have been reported in the literature. Since 1882, Bozeman reported the largest pseudo-pancreatic cyst which weighed ten (10) kg [10]. Reported a huge cyst containing about 6100 ml fluid [11], followed by Aslam (2012) who reported a cyst measured 25 x 17 cm and contained 4.5 liters of fluid [12]. Recently 2017 reported a huge cyst 25x20x14 cm (estimated 7000 mL of fluid) [13], reported a giant multilocular cyst measured 30 cm × 15 cm × 14 cm a volume of (about 6300 ml) [14]. After extensive check out sizable cysts throughout the literature mentioned by various authors, the cyst size in this manuscript (28.5 x 20x 18 cm with an estimated volume of 10260 ml) was found to be the largest pancreatic pseudocyst reported in the literature, and could be excised so far.

The pseudo-pancreatic cyst could be asymptomatic or symptomatic with pain, nausea, vomiting, and early satiety or complicated manifestations as hemorrhage, fluid infection, and fistula formation or compression of adjacent organs (stomach, duodenum, common bile duct, pancreatic duct, and large vessels) [15]. The prevalence of pancreatic pseudocysts is more frequently reported in chronic pancreatitis versus acute pancreatitis. Pancreatic pseudocysts are most commonly seen in alcoholic chronic pancreatitis followed by idiopathic chronic pancreatitis, and lastly in biliary pancreatitis [16]. After acute pancreatitis, patients had high Ranson score are more prone to significant risk for developing giant pseudocysts [14]. Our patient didn't have any considerable past history of pancreatitis, even more this huge sized cyst didn't express more than minor upper gastrointestinal symptoms.

Principle methods of management of pseudo-pancreatic cyst are percutaneous drainage, drainage via endoscopic approach, and open surgery. Surgery is considered the most important line of treatment of the pancreatic pseudocysts, either by internal or external drainage, or cyst excision [12]. Resections have been suggested by for all pseudocysts [17], and according to Parks and his colleges 12% of cases managed by surgical excision and this acquired the necessity of distal pancreatectomy [18]. Moreover, surgical drainage is contraindicated in cystic mass when pseudocyst is not certain [9]. In our case the idea of excision was a true surgical challenge. High BMI, uncertain nature of the cyst, risk of rupture during aspiration, and possible leakage with any drainage procedure were another challenge. All these possibilities were discussed with the patient and the decision of the surgical excision was taken after informed written consent. A successful complete excision was achieved with very minimal distal pancreatectomy, and post-operative period follow up for about 2 years now was almost free, and without recurrence see (Figure 1, 2).

4. Conclusion

Huge pseudo-pancreatic cysts can occur after idiopathic mild attack of pancreatitis, and even with huge sized cysts symptoms could be absent or minimal. Surgical excision is feasible and could be achieved even in huge cyst.

References

1. Habashi S, Draganov PV. Pancreatic pseudocyst. World J Gastroenterol. 2009; 15: 38-47.

2. Zhang AB, Zheng SS. Treatment of pancreatic pseudocysts in line with D'Egidio's classification. World Journal of Gastroenterology: WJG. 2005; 11: 729.

3. Yang CC, Shin JS, Liu YT, Yueh SK, Chou DA. Management of pancreatic pseudocysts by endoscopic cystogastrostomy. Journal of the Formosan Medical

Association. 1999; 98: 283-6.

4. Egidio D and Schein M. "Pancreatic pseudocysts: a proposed classification and its management implications," British Journal of Surgery. 1991; 48: 981-4.

5. Nealon WH and E. Walser, "Main pancreatic ductal anatomy can direct choice of modality for treating pancreatic pseudocysts (surgery versus percutaneous drainage)," Annals of Surgery. 2002; 235: 751-8.

6. B. Andersson, E. Nilsson, J.Willner, and R. Andersson, "Treatment and outcome in pancreatic pseudocysts," Scandinavian Journal of Gastroenterology. 2006; 4: 751-6.

7. Ammori BJ, Bhattacharya D, Senapati PS. Laparoscopic endogastric pseudocyst gastrostomy: a report of three cases. Surgical Laparoscopy, Endoscopy & Percutaneous Techniques. 2002; 12: 437-40.

8. Winship D. Pancreatic pseudocysts and their complications. Gastroenterology. 1977; 73: 592-603.

9. Sarr MG, Aranha GV, Way LW, Houghton SG. Drainage of pancreatic pseudocysts. In Atlas of Upper Gastrointestinal and Hepato-Pancreato-Biliary Surgery. 2007; 729-44.

10. Warshaw AL, Christison-Lagay ER. Pancreatic cystoenterostomy. In: Baker RJ, Fischer JE, editors. Mastery of surgery. 5th ed. New York: Lippincott Williams & Wilkins. 2009; 1277-98.

11. Walker LG Jr, Stone HH, Apple DG. Pseudocysts of pancreas: a review of 59 cases. South Med J. 1967; 60: 389-93.

12. Shah, Syed and Abdullah, Muhammad and Kakar, Abdul and Zubair, Muhammad. Giant Pancreatic Pseudocyst. Journal of the College of Physicians and Surgeons-Pakistan: JCPSP. 2012; 22. 325-7.

13. Alhassan S, Umar S, Lega M. One of the Largest Pancreatic Pseudocysts in the Literature: A Case Report. Cureus 2017; 9: e1493.

14. Udeshika W, Herath H, Dassanayake S, Pahalagamage S, Kulatunga A : A case report of giant pancreatic pseudocyst following acute pancreatitis: experience with endoscopic internal drainage; BMC Res Notes 2018; 11: 262.

15. Aghdassi AA, Mayerle J, Kraft M. Pancreatic pseudocysts – when and how to treat? . HPB (Oxford). 2006; 8:432-41.

16. Lerch MM, Stier A, Wahnschaffe U, Mayerle J. Pancreatic pseudocysts: observation, endoscopic drainage, or resection? Deutsches Ärzteblatt International. 2009; 106: 614.

17. Zirngibl H, Gebhardt C, FaSbender D. Drainagebehandlung von Pankreaspseudocysten. Langenbecks Arch Chir. 1983; 360: 29.

18. Parks RW, Tzovaras G, Diamond T, Rowlands BJ. Management of pancreatic pseudocysts. Ann R Coll Surg Engl. 2000; 82: 383-7.