

Pseudocysts of the Pancreas

Safiye Göğüş, M.D.* / Nebil Büyükpamukcu, M.D.** /
Akgün Hiçsönmez, M.D.***

Pancreatic pseudocyst occurs infrequently, especially, in the pediatric age group. Up until 1975 only about 75 cases in children have been reported in the literature.¹ In these cases abdominal pain (68 %), abdominal mass (64 %) and vomiting (52 %) were the most frequent findings. The serum amylase was elevated and radiological studies of the upper intestinal tract with contrast material were consistent with a abdominal mass in 88 % of the cases. Sixty per cent of these were due to trauma while in 32 % of the cases the cause was unknown. It has been accepted that childhood pancreatitis can also be a factor in the pathogenesis of pseudocysts of the pancreas.¹⁻⁴ Untreated cysts may bleed, become infected or rupture and cause peritonitis. They rarely disappear spontaneously. For these reasons surgery is usually recommended. The appropriate surgical approach is determined by the location and the duration of the pseudocyst.

Recently a child with a pseudocyst of the pancreas was treated at Hacettepe Children's Hospital. The purpose of this paper is to report this case because of the rarity of the condition in children.

Case Report

A three year old caucasian boy was admitted to the Hacettepe Children's Hospital with chief complaints of abdominal distension and pain for one month duration. No previous history of trauma or infection was obtained.

* Associate Professor of Pediatrics, Pediatric Pathologist.

** Assistant Professor of Pediatric Surgery.

*** Professor of Pediatric Surgery, Head of the Pediatric Surgery Department.

Physical examination showed a child in no acute distress and with normal vital signs. Fullness was noted in the upper abdominal quadrant. A slightly tender mass with the dimensions of 10x15 cm filled the epigastrium. Other physical findings were not contributory. Laboratory findings were within normal limits including serum and urine amylase values. Upper gastrointestinal x-ray series revealed that the stomach had been displaced anteriorly to the left by a mass exerting pressure on its lesser curvature (Figure 1). Lateral radiograms of the abdomen, from an intravenous pyelographic examination, showed a round soft tissue mass below and behind the stomach gas bubble. The mass had also displaced the left kidney slightly downwards.



Figure 1

One of the roentgenograms of the upper gastrointestinal series shows the barium filled stomach to be displaced anteriorly and to the left by a mass exerting extrinsic pressure on its lesser curvature

Presumptive preoperative diagnosis was the pseudocyst of the pancreas. The patient was operated 2 days after the admission. A soft mass with the dimensions of 10x15x15 cm was found between colon, spleen, and the posterior wall of the stomach: This mass originated from the tail and the body of the pancreas. It contained 700 cc light yellow clear fluid. It was adherent to the adjacent organs. Partial pancreatectomy (body and tail) and total excision of pancreatic cyst were performed, without splenectomy. The histopathological examination of the

material exised from the cyst wall was composed of granulation and fibrous tissue without epithelial lining(Figure 2) and the resected material of the pancreas showed interstitial fibrosis and chronic inflammation (Fi-

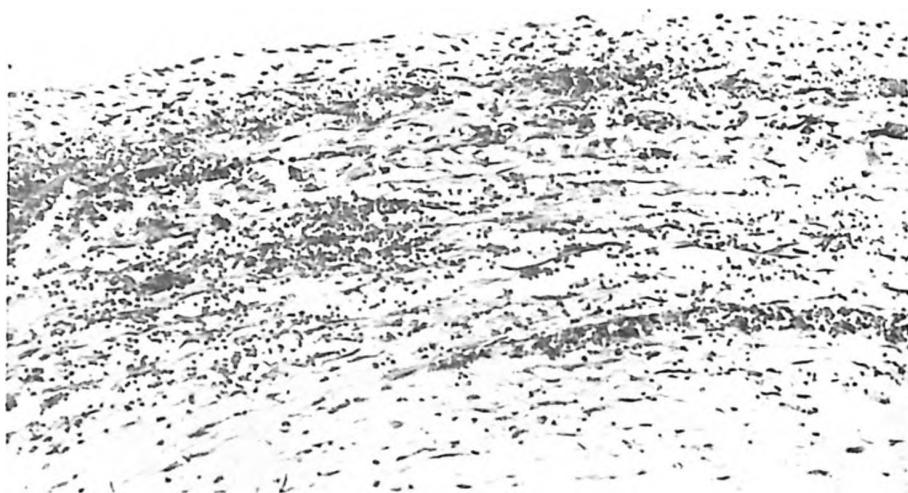


Figure 2

The pancreatic pseudocyst wall was composed of granulation and fibrous tissue without epithelial lining. H&E X 75

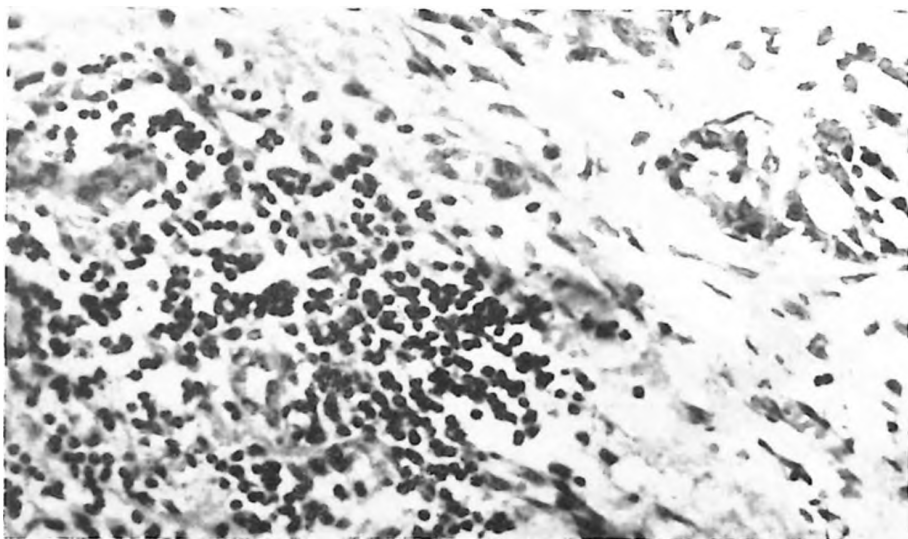


Figure 3

Chronic inflammation and marked fibrosis of pancreas. H&E X 250

gure 3). Postoperative course was uneventful; both laboratory and physical findings were within normal limits; and the patient was discharged ten days after the operation in good condition.

Discussion

A diagnosis of pseudocyst of the pancreas should be thought in the pediatric patients with abdominal pain, fever and vomiting, and an epigastric mass. A history of recent blunt trauma should increase suspicion. Moossa⁵ noted the role of the trauma in the etiology of acute pancreatitis with pseudocyst formation. Two distinct clinical types of traumatic pancreatitis are generally recognized. The immediate type presents an acute abdominal emergency, and the delayed type causes pseudocyst formation, several days or weeks after the injury. Mumps, biliary tract disease, gastric duplication, hereditary pancreatitis rarely cause pancreatic pseudocysts.¹ In 1970, there was a report in the Turkish literature concerning a 4 year old boy with histologically proved pseudocyst of pancreas following acute pancreatitis. He was successfully treated with cysto-gastrostomy in Hacettepe Childrens Hospital.⁶

Our case had no previous history of trauma or infectious disease. But the resected material of the pancreas revealed chronic pancreatitis and in this case the etiology could not be determined. The cause of the pancreatitis may be either trauma or infection. The serum and urine amylase values were normal, probably they were abnormal in the beginning of the disease. As we know the serum amylase determination is helpful if it is raised, but the normal value does not eliminate the pancreatitis because the raised amylase can return to normal limit; within a few days even in severe pancreatitis.

In the review of 75 cases with pseudocyst of pancreas external drainage was performed as the operative treatment in 33 %, cystogastrostomy or cysto-jejunostomy in 45 %, excision in 13 %, and miscellaneous procedures in 8 %.¹ All these patients survived. In general when anatomical and technical factors are favorable internal drainage (Cystogastrostomy or cystojejunostomy) is the procedure of the choice. The cyst wall in our case was thin and was not suitable for visceral anastomosis, therefore we could not apply internal drainage. External drainage could not also be considered because of post operative difficulties, such as pancreatic fistula and long hospitalization.

In the literature 10 out of 75 (13 %) had had excision of the cyst and distal pancreatectomy. Our case was successfully treated with partial

pancreatectomy and total excision of pancreatic cyst without splenectomy. Follow-up of the case after one year showed no evidence of recurrence of cyst or signs of diabetes mellitus.

We think partial pancreatectomy and excision of the pseudocyst can be used in the treatment of the pancreatic pseudocyst without any complications.

Summary

A 3 year old Caucasian boy with pseudocyst of pancreas has been presented. The case was successfully treated with partial pancreatectomy and total excision of the cyst. No evidence of recurrence of the cyst or signs of diabetes mellitus were observed after one year.

The pertinent literature covering the cases of pseudocyst of pancreas was reviewed.

REFERENCES

1. Cooney, D. R. and Grosfeld, J. L.: Operative management of pancreatic pseudocysts in infants and children. A review of 75 cases. *Ann. Surg.*, 182: 590, 1975.
2. Wool, G., and Goldring, D.: Pseudocyst of the pancreas. *J. Pediat.*, 70: 586, 1967.
3. Bongiovi, J. J. and Logosso, R. D.: Pancreatic pseudocyst occurring in the battered child syndrome. *J. Pediat. Surg.*, 4: 220, 1969.
4. Hendren, W. H., Greep, J. M., and Patton, A. S.: Pancreatitis in childhood: Experience with 15 cases. *Arch. Dis. Child.*, 40: 132, 1965.
5. Moossa, A. R.: Pancreatic pseudocysts in children. *J. Roy. Coll. Surg. Edin.*, 19: 149, 1974.
6. Hiçsönmez, A.: Çocuklarda akut pankreatit. 5 vaka münasebetiyle. *Çocuk Sağ. ve Hast. Derg.* 13: 35, 1970.