

CASE REPORT

Percutaneous drainage treatment of traumatic pancreatic rupture with pancreatic transection

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Drenaje percutáneo;
Lesión pancreática;
Pseudoquiste;
Transección pancreática

Abstract

Management of traumatic pancreatic pseudocyst associated with pancreatic duct laceration is controversial. Surgical therapy has been classically considered the treatment of choice for those pseudocysts. However, several authors have published good results with percutaneous drainage. Percutaneous drainage can be performed easily, with minimal complication and may facilitate the resolution of a pseudocyst.

We present a case of a 16-year-old boy who sustained blunt abdominal trauma in a vehicle accident. A large pancreatic pseudocyst developed, with complete disruption of the main pancreatic duct. Percutaneous drainage under ultrasound guidance was performed and was associated with the administration of octreotide (to inhibit exocrine pancreatic secretion). The drainage flow decreased gradually until ceasing, and the pseudocyst disappeared.

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Tratamiento de una rotura pancreática traumática con transección pancreática mediante drenaje percutáneo

Resumen

El manejo de pseudoquistes pancreáticos de origen traumático asociados con el desgarro del conducto pancreático es polémico. Tradicionalmente, el abordaje de elección para dichos pseudoquistes ha sido el tratamiento quirúrgico. No obstante, varios autores han publicado buenos resultados con el drenaje percutáneo. El drenaje percutáneo se puede realizar de forma sencilla, con mínimas complicaciones y podría ayudar a resolver el pseudoquiste. Presentamos el caso de un joven de 16 años que sufrió traumatismo abdominal contuso en un accidente de coche. Se desarrolló un pseudoquiste pancreático

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de grandes dimensiones que causó trastorno absoluto del conducto pancreático principal. Se realizó drenaje percutáneo bajo vigilancia ecográfica junto con la administración de octreótida para inhibir la secreción exocrina del páncreas. El flujo del drenaje descendió de forma gradual hasta su cese completo y la desaparición del pseudoquiste. © 2009 Elsevier España, S.L. Todos los derechos reservados.

Introduction

Pancreatic trauma is a relatively infrequent phenomenon, representing only 1–12% of all abdominal trauma.^{1–6} In the pediatric and adolescent age groups, abdominal trauma is usually a blunt injury, its most frequent complication being a pseudocyst.⁴ The treatment of pancreatic pseudocysts in childhood and adolescence differs from that of adults, and tends to be more conservative, using total parenteral nutrition or percutaneous drainage. This is probably due to the healthy state of children in general, including their pancreas.⁵ Traditionally, whenever major rupture of the pancreatic duct was involved, the treatment had been surgical. However, various authors have published good results using percutaneous drainage in these cases.^{6–8}

We present a case of a 16-year-old male who sustained rhabdomyolysis and complete disruption of the pancreatic corporocaudal junction, which resolved satisfactorily without surgery, but rather with percutaneous drainage under ultrasound guidance, associated with the administration of octreotide.

Clinical case

A 16-year-old male, of approximately 50 kg in weight and 160 cm in height, was admitted to the emergency service of our hospital after being trapped under a tractor for 4 h. The patient was conscious, oriented and only referred anesthesia in the L2–L5 territory. The rest of the physical exam was normal and there were no other visible injuries. An abdominal-pelvic computerized tomography scan showed a fracture of the sacral foramen of S4 and a contusion of the left paravertebral and psoas musculature. No fractures of the spinal column were observed in reconstructive CT images. Blood lab work-up including amylase and lipase, were normal (46 and 38 UI/L, respectively). The biochemistry results showed a CPK of 65000 UI. During the first 24 h of hospital admission in the Orthopedic Surgery service, the patient suffered progressive deterioration of renal function. He was diagnosed with rhabdomyolysis and was transferred to the Intensive Care Unit. At 48 h post-trauma, the patient presented vomiting, abdominal distension and a palpable mass in the left hemi-abdomen. Another CT scan showed a collection measuring 10 cm in diameter occupying the gastroesplenic space and a disruption of the continuity of the pancreatic tail, suggesting pancreatic rupture with pseudocyst formation (Fig. 1). Since we were dealing with a pancreatic rupture with a symptomatic pseudocyst in absence of active bleeding, and given our previous positive experience with the procedure, a percutaneous approach was decided on by the Radiology service. Percutaneous drainage through the stomach resulted in immediate

drainage of 950 cm³ of serohematic material. The amylase level in the extracted liquid was 12130 UI/L. Treatment was begun with total parenteral nutrition and intravenous octreotide (0.1 mg/day) with progressively increasing doses of up to 0.4 mg/day. When the drainage stopped being productive 20 days after the catheter was placed, the catheter was clamped and removed. Over this period, the renal function normalized, the patient began to tolerate oral diet and was discharged after 28 days. The CT scan at one week follow-up showed a small pseudocyst of approximately 3 cm in its largest diameter, which resolved



Fig. 1 (A) Abdominal CT scan suggests a transected pancreas in the corporocaudal junction (black arrow). Pseudocyst is also seen. (B) Pseudocystography of drained cavity, eight days later.

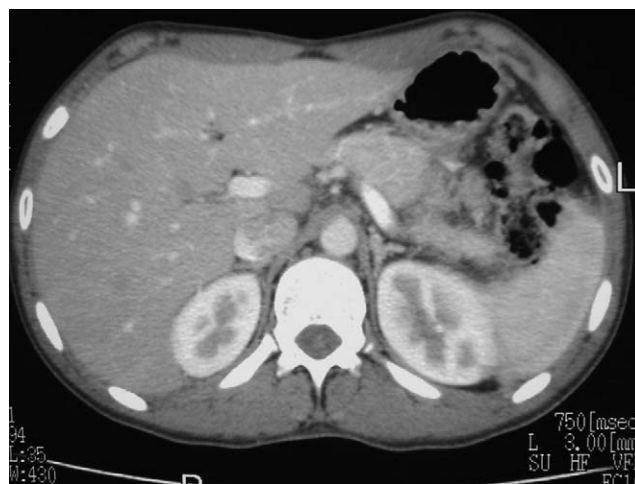


Fig. 2 Abdominal CT scan three months later. No cavity is seen.

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