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SURGICAL IMAGES

Conservative endoscopic management for pancreatic trauma

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KEYWORDS
Pancreatic trauma;
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Endoscopic management;
Double pigtail stent

Summary Traumatic pancreatic injuries are rare: their severity correlates with main pancreatic duct involvement. We report the case of a 5-year-old child who presented with complete disruption of the main pancreatic duct, treated successfully with an endoscopically inserted double pigtail stent.

Introduction

Traumatic pancreatic injuries are rare: their severity correlates with main pancreatic duct involvement. Diagnosis is challenging but of prime importance: prognosis and correct management are directly linked to accurate diagnosis.

Abbreviations: ERCP, endoscopic retrograde cholangio-pancreatography; DPTS, double pigtail stent.

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Case presentation

A five-year-old boy was referred following an abdominal crush injury. At the initial survey, the abdomen was globally painful, the child had vomited. Laboratory tests were unremarkable except for isolated, markedly increased serum lipase at 1288 UI/L (normal < 57 UI/L). Abdominal CT scan showed a fracture of the pancreatic body (grade 3 according the AAST classification [1]) associated with free intra-abdominal fluid (Fig. 1).

Endoscopic retrograde cholangio-pancreatography (ERCP) demonstrated contrast extravasation at the level of the pancreatic body (Fig. 2). A 5 cm long 5 Fr catheter (Johlin® Pancreatic Wedge Stent, Cook Ireland Ltd, Limerick, Ireland) was inserted into the main pancreatic duct bridging the disrupted duct (Fig. 3).

One week later, abdominal pain reappeared associated with elevated serum lipase prompting another CT scan that revealed the presence of a 3 cm peri-pancreatic pseudo-cyst at the level of the main duct fracture associated with stent migration (Fig. 4). It was not possible to attain the distal pancreatic duct during repeat ERCP; a 5 cm long 7 Fr double pigtail stent (DPTS) (Zimmon® Biliary Stent, Cook Ireland Ltd, Limerick, Ireland) was inserted, creating a trans-papillary cysto-duodenostomy (Fig. 5).

The DPTS was removed seven weeks later. ERCP visualized the tract left behind by the stent along with some irregularity in diameter over 1 to 2 cm of the main pancreatic duct in the cephalo-isthmic portion of the pancreas.

Figure 1. Abdominal CT scan, axial slice, showing the pancreatic fracture of the body of the pancreas (white arrow).

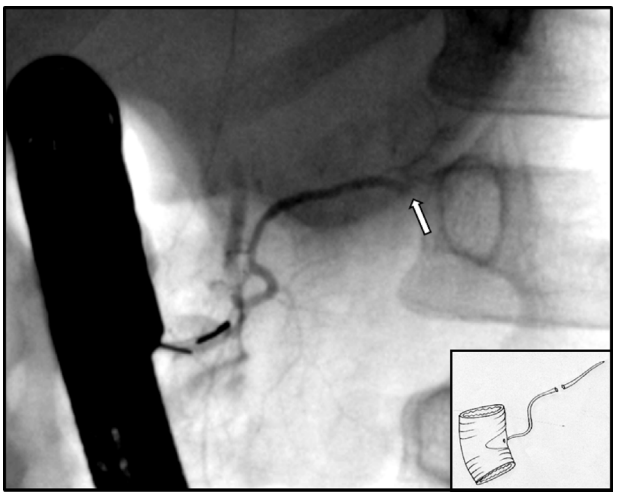

Figure 2. Endoscopic retrograde cholangio-pancreatogram with opacification of the main pancreatic duct showing an arrest of contrast flow (white arrow) at the level of the body of the pancreas.

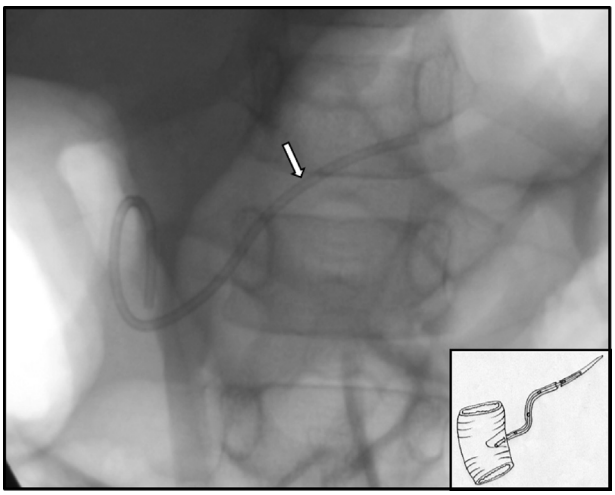

Figure 3. Stent placement (white arrow), positioned in the distal pancreatic duct.

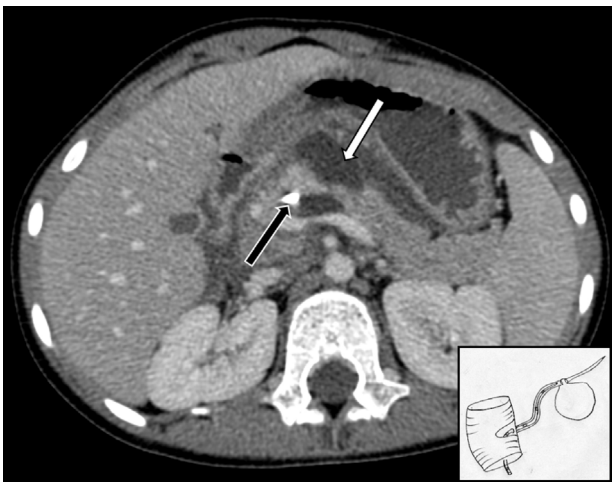

Figure 4. Abdominal CT scan (axial slice) showing the pseudo-cyst (white arrow) secondary to stent migration (black arrow).

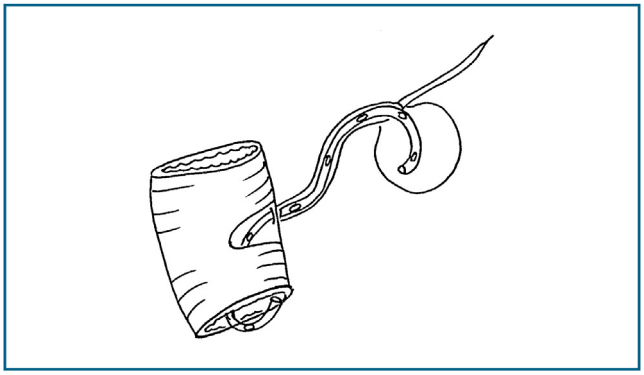

Figure 5. Schematic drawing showing the placement of the double pigtail stent draining the pancreatic pseudo-cyst via the papilla.