Successful management of traumatic pancreatic transection using ERCP-guided pancreatic stenting

Fig. 1 Abdominal computed tomography (CT) scan (transverse view) of an 11-year-old boy after a cycling accident, showing complete pancreatic transection (type III).

Fig. 2 Abdominal CT scan (coronal view) showing complete pancreatic transection (type III).

An 11-year-old boy was admitted to the emergency department with severe abdominal pain and vomiting after falling off his bicycle. A round hematoma was noted in the left hypochondrium consistent with bicycle handlebar trauma. Blood analysis showed mild leucocytosis and marked elevation of lipase (2507 U/L) and amylase (1331 U/L). Abdominal ultrasound excluded spleen injury, and thoracic X-ray was unremarkable.

Abdominal computed tomography (CT) scan showed a total transection of the pancreas, including the pancreatic duct, in the distal body, without liver, splenic, or vascular lesions (• Fig. 1 and • Fig. 2). Endoscopic retrograde cholangiopancreatography (ERCP) was performed. Pancreatography revealed contrast extravasation from the main pancreatic duct in the distal body (• Fig. 3, • Video 1). Cannulation of the caudal portion of the duct was not possible; therefore, a 5-Fr, 12-cm length, plastic monopigtail stent was placed with the distal extremity in the fistula.

The patient recovered well and was discharged after 20 days without pain, and

with almost complete normalization of blood analysis.

After 1 month, ultrasound showed no signs of pancreatic injury. An ERCP was performed again, showing a well-positioned pancreatic stent that was subsequently removed using a forceps. Pancreatography showed a mild stenosis of the main duct associated with a cystic lesion (• Fig. 4). The asymptomatic patient was discharged on the following day.

Isolated pancreatic transection with duct injury because of blunt abdominal trauma is very rare. Its management can be surgical, usually with distal pancreatectomy, or nonsurgical. Previous studies have shown successful results with both approaches, with more rapid resolution in the surgical group [1], but ERCP was not used for therapeutic purposes. In fact, only a few case reports have assessed the efficacy of this technique [2,3]. While clinically unstable patients need a more aggressive management, in those with clinical stability, ERCP-guided pancreatic stenting to ensure effective drainage seems to be a very successful approach.

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Fig. 3 Fluoroscopic images obtained with endoscopic retrograde cholangiopancreatography (ERCP) showing contrast extravasation from the main pancreatic duct.

Fig. 4 Follow-up pancreatogram after 1 month showing mild pancreatic duct stenosis with associated cystic lesion.

Video 1

Pancreatogram showing contrast extravasation and placement of the stent.

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