

Use of a pre-positioned guide wire to aid in the removal of a pancreatic duct stent that had migrated further into the duct

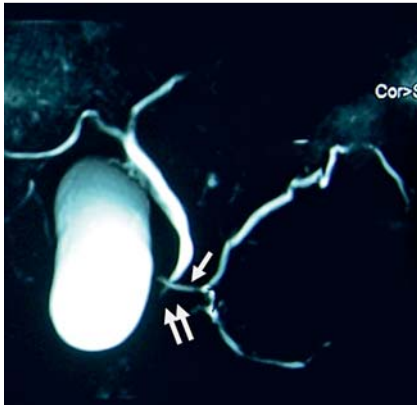


Fig. 1 Magnetic resonance cholangiopancreatography (MRCP) showing that within the pancreatic head the minor pancreatic duct (white arrow) was dilated and the major pancreatic duct (double white arrows) was invisible.

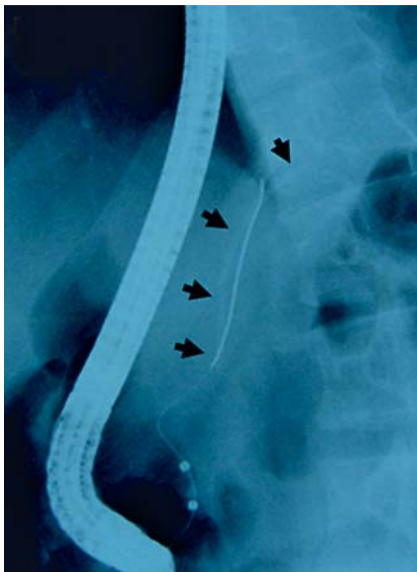


Fig. 2 Endoscopic retrograde cholangiopancreatography (ERCP) 1 month after implantation showing that the stent (black arrows) had migrated further along the duct into the body of the pancreas.

Migration of a pancreatic duct stent further into the duct (proximal migration) after implantation is a relatively rare complication [1]. Various pieces of equipment such as a small balloon, snare, forceps, and grasping tripod have been used successfully to extract such stents [2–4]. However, their removal has proved technically

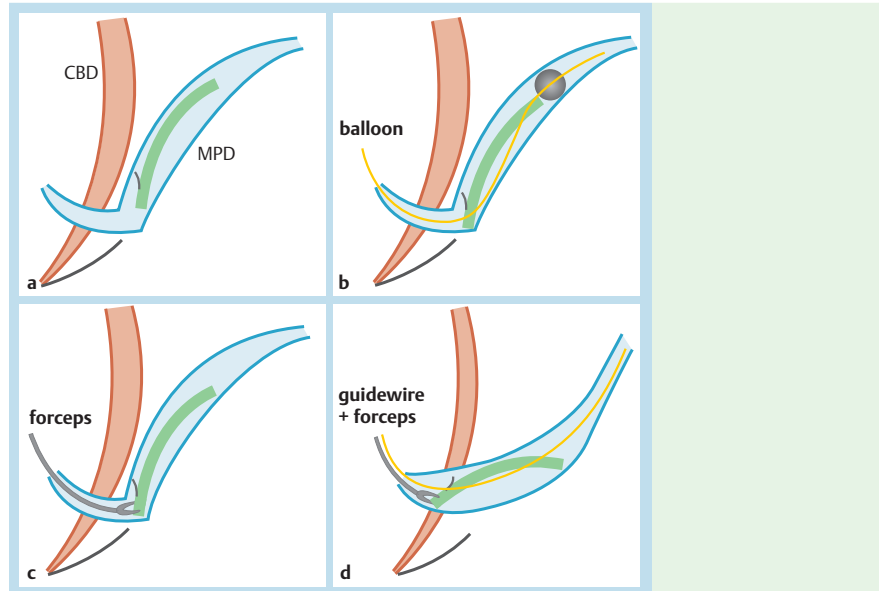


Fig. 3 Entire process for extraction of the proximaly migrated stent from the pancreatic duct. CBD, common bile duct; MPD, minor pancreatic duct. **a** The stent that had migrated further along the pancreatic duct into the body of the pancreas. **b** An attempt to pull out the stent with a small balloon that had been inserted and inflated was hampered by the sharp angle formed by the stent and the minor pancreatic duct. **c** An attempt to pull out the stent with a rat-tooth forceps was also hampered by the same angle. **d** A pre-positioned guide wire was used to keep the pancreatic duct relatively straight and the stent was successfully extracted using forceps.

challenging because of the narrow and tortuous shape of the pancreatic duct [2,4]. This report describes a new method for extraction of a proximaly migrated pancreatic duct stent with the help of a pre-positioned guide wire.

A 16-year-old boy with recurrent acute pancreatitis caused by pancreas divisum (Fig. 1) was treated by implantation of a plastic stent into the pancreatic duct. Endoscopic retrograde cholangiopancreatography (ERCP) 1 month later showed that the pancreatic duct stent had migrated further along the pancreatic duct into the body of the pancreas (Figs. 2 and 3a). After dilation of the minor pancreatic duct with an 8.5-Fr dilator, extraction of the stent was attempted using a snare and a basket, but both failed because they could not be fully opened in the pancreatic duct. A 1-cm balloon and a rat-tooth forceps were then tried, both of which were able to pull the stent out by a little bit. However, they were finally

hampered by the sharp angle formed by the stent and the minor pancreatic duct in the pancreatic head because of the narrow and tortuous shape of the pancreatic duct (Fig. 3b,c).

A second ERCP was tried 3 days later. First, a 0.035-Fr guide wire was placed in the pancreatic duct, which helped to keep the minor pancreatic duct in a relatively straight shape and in this way blunted the angle. A forceps was then inserted along the guide wire in the same working channel and finally grasped and successfully extracted the whole stent (Fig. 3d). The patient was discharged 2 days later without complications.

In this case, a proximaly migrated stent was successfully extracted with the help of a pre-positioned guide wire. This method may be a good alternative option for other similar cases.

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