

Endoscopic Stenting of the Main Pancreatic Duct in Patients With Pancreatic Fluid Collections After Pancreas Transplantation

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Abstract : Introduction: One of the most common complications after pancreas transplantation are pancreatic fluid collections (PFCs), which are often complicated not only by infection and subsequent dysfunction of the pancreatoduodenal graft (PDG), but also with a rather high mortality rate of recipients. Drainage is not always effective and often requires repeated open surgical interventions, which worsens the outcome of the surgery. Percutaneous drainage of PFCs combined with endoscopic stenting of the main pancreatic duct of the pancreatoduodenal graft (MPDPDG) showed high efficiency in the treatment of PFCs. Aims & Methods: From 01.01.2012 to 31.12.2021 at the Sklifosovsky Research Institute for Emergency Medicine were performed 64 transplantations of PDG. In 11 cases (17.2%), the early postoperative period was complicated by the formation of PFCs. Of these, 7 patients underwent percutaneous drainage of pancreonecrosis with high efficiency and did not required additional methods of treatment. In the remaining 4 patients, drainage was ineffective and was an indication for endoscopic stenting of the MPDPDG. They were the ones who made up the study group. Among them were 3 men and 1 woman. The mean age of the patients was 36,4 years. PFCs in these patients formed on days 1, 12, 18, and 47 after PDG transplantation. We used a gastroscope to stent the MPDPDG, due to anatomical features of the location of the duodenoduodenal anastomosis after PDG transplantation. Through the endoscope channel was performed selective catheterization of the MPDPDG, using a catheter and a guidewire, followed by its contrasting with a water-soluble contrast agent. Due to the extravasation of the contrast, was determined the localization of the defect in the PDG duct system. After that, a plastic pancreatic stent with a diameter of 7 Fr. and a length of 7 cm. was installed along guidewire. The stent was installed in such a way that its proximal edge completely covered the defect zone, and the distal one was determined in the intestinal lumen. Results: In all patients PDG pancreaticography revealed extravasation of a contrast in the area of the isthmus and body of the pancreas, which required stenting of the MPDPDG. In 1 (25%) case, the patient had a dislocation of the stent into the intestinal lumen (III degree according to Clavien-Dindo (2009)). This patient underwent repeated endoscopic stenting of the MPDPDG. On average 23 days after endoscopic stenting of the MPDPDG, the drainage tubes were removed and after approximately 40 days all patients were discharged in a satisfactory condition with follow-up endocrinologist and surgeon consultation. Pancreatic stents were removed after 6 months \pm 7 days. Conclusion: Endoscopic stenting of the main pancreatic duct of the donor pancreas is by far the most highly effective and minimally invasive method in the treatment of PFCs after transplantation of the pancreatoduodenal complex.

Keywords : pancreas transplantation, endoscopy surgery, diabetes, stenting, main pancreatic duct

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