

ABSTRACT

Knowledge of the anatomy of the pancreas, its vascular structures and their anatomical variations is crucial for the hepato-pancreato-biliary surgeon. Some anatomical variations of the pancreas can cause specific diseases in patients. Our work aims to provide a detailed review of clinically important variations in the anatomical structure of the pancreas and its vascular supply. The other goal was to identify the clinically important anatomical variations in the two most frequently performed pancreatic resections. The next goal was to describe the vascular supply of postresection pancreatic remnants and to determine a potentially critical anatomical arrangement that could influence postoperative perfusion of the remnant. The results were confirmed in a retrospective analysis of the patients after pancreatic resections. The most critical variations in the vascular supply of the pancreas were identified as a result of the experiment. Critical anatomical variations in the vascular supply of the postresection remnant after pancreaticoduodenectomy were found. In these cases, the vascular supply of the pancreatic remnant is provided only through non-constant anastomosis between the splenic artery and the transverse pancreatic artery. In the retrospective analysis, these patients had a significantly higher risk of developing postoperative pancreatic fistula.

Keywords

Anatomical variations; blood supply; distal pancreatectomy; pancreaticoduodenectomy; pancreaticojejunostomy; perioperative bleeding; postoperative pancreatic fistula; postresection pancreatic remnant; pancreas