

## GREAT SAPHENOUS VEIN PANEL GRAFT: A NOVEL TECHNIQUE FOR VASCULAR RESECTION AND RECONSTRUCTION AFTER PANCREATODUODENECTOMY

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**Background** : Pancreaticoduodenectomy with vascular resection and reconstruction is the optimal strategy for pancreatic tumors with vascular involvement. However, options for PV/SMV reconstruction also include a variety of techniques. This study aims to evaluate the short-term results of pancreaticoduodenectomy with vascular resection and reconstruction with GSV paneled graft.

**Methods** : We retrospectively reviewed the medical records of 225 patients who underwent curative-intent pancreaticoduodenectomy with or without vascular reconstruction between January 2012 and August 2024. All demographic and operative parameters were analyzed to determine their effect on the patient's survival. An interposition graft was reconstructed with a GSV panel graft to tailor the graft diameter and length.

**Results** : Among 225 patients who underwent pancreaticoduodenectomy, 188 patients performed pancreaticoduodenectomy alone(PD), and 37 patients performed pancreaticoduodenectomy with vascular reconstruction(PD+V), including 15 lateral venography, 14 end-to-end anastomoses, five resections with GSV panel graft position, one primary repair hepatic artery and one artery and venous resection and reconstruction. The PD alone group had less intraoperative blood loss(600 vs. 1200 ml,  $p < 0.001$ ) and less operative time(447 mins vs. 541 mins,  $p > 0.001$ ) but increased incidence of pancreatic fistula(64.4% vs. 18.9%,  $p < 0.001$ ). For the PD+V group, the vascular complication was increased(42.5% vs. 3.3%,  $p < 0.001$ ). The 90-day mortality was 0.6% in the PD group and 5.7% in the PD+V group( $p = 0.07$ ). The 1-year patency of the GSV panel graft is 100%.

**Conclusions** : Vascular reconstruction during pancreaticoduodenectomy does increase vascular complication but does not increase 90-day morbidity or mortality. GSV panel graft was safe and feasible for PV/SMV reconstruction in short-term outcome

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