

Case Presentation

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Involvement of the superior mesenteric vein (SMV) or the portal vein (PV) by pancreatic head cancer historically was a relative contraindication to pancreaticoduodenectomy. However, since the first case of portal vein resection (PVR) concomitant with resection of the pancreatic head were introduced by Fortner in 1973, a number of studies have investigated the benefits of PVR with an acceptable morbidity and mortality rate. Recently, some studies reported that resection and reconstruction of PV or SMV should be considered as an integral part of pancreatic surgery; venous invasion of mesenterico-portal system would be seen as a function of tumor location rather than an indicator of aggressive tumor biology.

Various methods are currently used for PVR such as end-to-end primary anastomosis with or without splenic vein ligation, tangential resection of the SMV-PV confluence with or without autologous patch, autologous interposition graft with or without splenic

vein ligation, and so on. All of these methods at the time of pancreaticoduodenectomy to facilitate a complete resection (R0/R1) of a pancreatic cancer have been shown to be associated with a low rate of perioperative morbidity and similar rates of R0 resection and overall survival when compared with patients treated with standard pancreaticoduodenectomy without PVR. But, the following two principles of management must be adhered to when considering the performance of an extended pancreaticoduodenectomy including PVR:

1. The tumor does not involve the superior mesenteric artery.
2. An R0/R1 resection is reasonably expected.

With proper patient selection, a detailed understanding of the anatomy of the root of mesentery, and adequate surgeon experience, vascular resection and reconstruction can be done safely and appears to give similar survival.