

**PANCREATIC ISLET TRANSPLANTATION: UTILITY OF
DUCTULAR OBSTRUCTION AND EXOCRINE
ATROPHY MODEL**

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Induction of 'silent' exocrine atrophy and endocrine 'enrichment' in pancreatic grafts following ductular blockade may have a role in human diabetes by circumventing currently elusive islet isolation/purification protocols. To explore this potential, pancreatic isografts were performed in 12 pairs of inbred Wistar/NIN rats. Donor pancreatectomy was performed after distal clamping and cannulation of common bile duct and inj. of 0.5 ml. polyacrylamide gel (blocked n = 7) or normal saline (unblocked n=5) respectively. One to 2 m.m. fragments of the resulting mildly distended pancreases were transplanted in to 2 sites (renal capsule and iliac fossa subcutaneously) of each recipient. Post—operative biopsies of the transplanted grafts (unilateral nephrectomy and iliac fossa biopsies) revealed macroscopic and microscopic evidence of necrotizing pancreatitis in both the groups at both the sites (histiocytic and giant cell infiltration, fat necrosis and focal calcification with destruction of exocrine and endocrine cells) as early as 1 and 3 weeks. Possible detrimental factors include: volume and pressure of ductal injection, graft sites (confined spaces), post-operative wound infection and biocompatibility of the material used for ductular blockade may also be important.