

**Pancreatectomy (P) and islet auto-transplantation (IAT) for chronic pancreatitis (CP)**

A.M. Carlson, J.J. Blondet, A. Gruessner, M.D. Bellin, B. Hering, G. Beilman, A.M. Moran D.E.R. Sutherland, *Departments of Surgery and Pediatrics, University of Minnesota*

P with IAT is done to relieve pain in patients (pts) with CP, when other therapies have failed, and to preserve beta cell mass to prevent or minimize post-P diabetes. In this retrospective study we assessed pain control, narcotics(N) use, quality of life(QL), and islet graft function(fxn) over time.

**METHODS:** 188 Ps (25 children 4-18 y/o) with IAT were done from Feb, 1977 to Sept, 2006 (71% female; adult mean age 37 yrs). The pancreatitis was idiopathic(60%), alcohol (17%), divisum(12%), biliary(7%), or hereditary(5%). Total (T)P was done in 68%, near-T in 4%, completion in 17%, and partial/distal in 11%. Records were reviewed and pts were telephone surveyed (83 adult, 18 pediatric) at 2-330 mos post-P/IAT. Islet fxn was classified as **full** for pts insulin-independent(II); **partial** if only on once-daily long-acting insulin; and as **failed** if on a full diabetic regimen.

**RESULTS:** Actuarial pt survival was 98 at 1, 92 at 3, 87 at 5 and 73% at 10 yrs. All **adults** stated they had pancreatitis pain (PP) prior to P/IAT and 93% were on daily N. After P/IAT, 94% had improvement in pain, 49% had ceased N, and 96% would recommend the procedure. 85% of adults stated QL improved post-P/IAT; 8% were the same; 5% worse. Islets fxn in 74% of adults at 1 and 70% at 5 yrs; full fxn was seen in 55% at 1, 40% at 5 and 34% at 10 yrs. For adults given <2500 (n=28), 2500-5000 (n=27) and >5000 IE/kg (n=21), the 1 yr II rates were 0%, 47% and 76%. Prior resection lowered yield (2712 vs 4077 IE/kg, p=.003). All **pediatric** pts were on N before, only 39% at follow-up; 94% improved and 67% were entirely pain free; at 1 yr, 78% had islet fxn and 56% were II; mean islet yields with full, partial and no fxn were 7467, 4066 and 2890 IE/kg; II was 67% without and 33% with previous pancreas surgery.

**CONCLUSIONS:** P/IAT can ameliorate pain and improve QL in CP pts, with diabetes minimized in 2/3 and 1/3 II long-term. N-induced hyperalgesia from long-term use (x=6 yrs) prevents withdraw in some pts even when PP is gone. Islet yield and N withdraw may improve if CP pts are seen earlier (< 1 yr on N) for P/IAT.