**TRANSMISSION OF INFECTION AFTER PANCREATECTOMY AND AUTOLOGOUS ISLET CELL TRANSPLANTATION FOLLOWING POTENTIALLY HIGH RISK PROCEDURES**

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**Aim**

Autologous islet transplantation (AIT) after pancreas resection has the potential to minimise glucose intolerance. Despite cell isolation being performed in a GMP facility some patients may be at an increased risk of infection. Two such cohorts could be those who have had previous drainage procedures (biliary or pancreatic) or those who have had significant pancreatic trauma. The risk of transmitting infection through the islet preparation in these types of patients is not well reported.

**Methods**

To date we have performed 8 islet autologous transplants (IAT) with 6 being in the relevant ‘high risk’ cohorts (previous pancreaticojejunostomy n=2, hepaticojejunostomy n=1 and pancreatic trauma n=3). Islets were isolated in a GMP HTA licensed facility. The pancreas is decontaminated with Fungizone, cephalosporin and a betadine wash prior to islet solation. We use BacT/ALERT SN culture bottles for detection of microbes in the pancreatic transport fluid (TF) and final washing (FW) steps. We also perform environmental monitoring by finger dabs, settle plates and from within the class II hoods. We also culture from the final islet preparation and perform a gram stain.

**Results**

Islet yields were significantly higher in the pancreatic trauma cohort (range 20,000 to 298,149 IEQ). All of those in this group (2 adults and 1 paediatric) remain insulin independent after more than 18 months follow up. In the drainage group 2 are C-peptide positive with the final patient still in the recovery phase but insulin independent. One pancreatic trauma patient grew staph epidermidis in the TF but had no post-operative infections. Another required a re-laparotomy after developing an infected collection in the pancreatic bed which cultured staph aureus after no growth during the isolation process. One pancreatic drainage patient had contaminated TF and a FW but did not develop any systemic sepsis other than a minor wound infection. The previous hepaticojejunostomy patient had contaminated TF and FW concordant with a bile swab taken at the time of the procedure (E. coli and Enterococcus casseliflavus) but developed no infectious complications.

**Conclusions**

Patients perceived to be at ‘high risk’ of developing contaminated islet isolations can be safely transplanted without any infection risk. Culture of microbes during pancreas transportation and islet isolation does not always lead to systemic infective episodes after transplantation despite also undergoing major abdominal surgery.