Figure 1: H&E staining of isograft, IL-17 KO allograft and allograft (x100)

Isograft: Normal parenchyma
IL-17 KO Allograft: No fibrotic plugs (OB), lymphocytic bronchiolitis, normal parenchyma
Allograft: Fibrotic plugs (OB arrows), lymphocytic bronchiolitis, abnormal parenchyma.

Isografts (n=4) had a completely normal lung histology. Allografts (n=4) showed OB, LB and abnormal parenchyma conform the established model. In the IL-17 KO allografts (n=4), however, no OB could be identified. LB lesions were still present, but less pronounced and lung parenchyma was almost normal. Chronic rejection lesions are decreased in IL-17 KO allografts, providing the ultimate proof of involvement of IL-17.

RETROSPECTIVE ANALYSIS OF BELGIAN EXPERIENCE WITH INTESTINAL TRANSPLANTATION.

Aim: The only alternative to Total Parenteral Nutrition (TPN) for complicated intestinal failure is Intestinal Transplantation (ITx) which is perceived as a high-risk procedure with inferior results compared to other organ Tx. Therefore ITx has been rarely applied in Belgium. In a multicenter retrospective review, we analyzed the overall Belgian experience with ITx.

Methods: The Belgium Liver Intestine Committee organized a survey among all Belgian Tx centers, based on the patient-specific data form of the international ITx registry. Overall activity and indications were reviewed. Patient/grant survival was calculated (Kaplan-Meier). Nutritional (TPN) independence and Quality of Life (QoL) (Karnofsky score) were analyzed.

Results: 21 ITx were performed in 20 patients (03/99-11/12), distributed among 5 centers: KUL (12), ULg (5), UZG (2), UCL (1), UZA (1). Median age was 38y (8mo-56y). Male/female ratio was 10/10. 5 were pediatrics (<18y) and 15 adults. Indications were anatomical or functional short bowel syndrome: intestinal ischemia(5), volvulus(5), Crohn(2), chronic intestinal pseudo-obstruction(2), splanchic thrombosis(2), Churg-Strauss(1), necrotizing enterocolitis(1), microvillus inclusion(1), intestinal atresia(1) and chronic rejection of a first ITx(1). Most patients also suffered from TPN-associated complications (infection/shortage of venous access or liver failure). An isolated small bowel was transplanted in 9 patients (plus kidney Tx in 2; plus pancreas Tx in 1); 10 received a combined liver and ITx; 2 received a multivisceral Tx. At time of Tx, 11 patients were hospitalized and 10 at home. 20 grafts were procured from deceased donors; one segmental intestinal graft was procured from a living donor. ABO blood group was identical in 63%, compatible in 37%. Median cold ischemia time was 5h30’ (3h17’-9h31’). All patients received tacrolimus-based immunosuppression. Basiliximab (anti-IL2 receptor antibody) induction was administered in 16 patients. In 11 patients donor specific blood was transfused as part of an immunomodulatory protocol. 5-year patient and graft survival is 59% and 55.6%, respectively. 8 patients died: 6 to sepsis, 1 to intracerebral hemorrhage; 1 sudden death remained unexplained. 1 patient developed postITx lymphoma. 2 chronic rejections occured for which one reTx was performed. Of 12 survivors (median follow-up 1870 days), 11 are nutritionally independent (TPN-free) and 10 have a Karnofsky score >90%.

Conclusions: ITx has come of age in Belgium. During the last 13 years, 21 ITx were performed in 5 centers. A 5-year patient/grant survival of 59%/55.6% is achieved, which is similar to results reported by the International ITx registry. In Belgium, awareness should grow that ITx represents a life-saving (and QoL improving) treatment in selected patients with reduced life expectancy due to significant complications from TPN and intestinal failure.