

## P-19

**Intestinal Failure Associated Liver Disease in Paediatric Patients Underwent Intestinal Lengthening Surgery for Short Bowel Syndrome**

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**Introduction:** Intestinal Failure Associated Liver Disease (IFALD) is a multifactorial hepatobiliary dysfunction resulting from medical and surgical management of intestinal failure (IF). Recent data suggested a 20% prevalence of IFALD in patients with IF, of which Short Bowel Syndrome (SBS) seems to be the one of the most frequent mechanism.

The aim of this study is to evaluate the risk of IFALD by performing liver biopsies in children with on PN and undergoing intestinal lengthening surgery.

**Methods:** A retrospective study of SBS children undergone intestinal lengthening surgery between January 2019 and July 2020 was performed.

Patients treated with long-term PN were selected and those who received liver biopsies at the time of surgery were analysed.

Local ethical was approved.

**Results:** Twelve SBS patients (M:F=6:6) were studied. Five of them were less than one year old, ten were preterm, including two with a gestational age of less than 28 weeks and two with extremely low body weight <1000g. All patients received SMOF lipid formula and cycling PN for more than 43 days, for an average time of 26 months. Ten started PN at birth. Seven patients had at least one sepsis. Nine were treated with bacterial overgrowth prophylaxis.

Liver biopsies were performed: eight showed fibrosis and ductal proliferation, one presented biliary duct hypoplasia without fibrosis, one biopsy was unremarkable and two were not available.

**Conclusion:** According to IFALD diagnostic criteria reported, 8/10 (80%) liver biopsies performed allowed IFALD diagnosis in the analysed sample.

The study confirmed the already known IFALD risk factors and showed that patients with intestinal failure due to SBS with PN treatment and undergoing intestinal lengthening surgery presented higher risk of IFALD.

In SBS children with greater risk of IFALD, surgery can improve intestinal function and consequently liver function.

## P-20

**Thirty Years of Intestinal Transplantation: Unique Outcomes from a Large Single-Center**

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**Introduction:** Over the past three decades intestinal transplantation (ITx) has served as a successful therapy for select candidates with intestinal failure (IF). Nonetheless, somewhat limited data exists on detailed long-term outcomes and predictors of success in the field. This large, detailed single-center analysis aimed to highlight advancements and trends in ITx over the past thirty years.

**Methods:** An IRB approved, prospective database has been maintained since the inception of the program in 1991. All ITx recipients between 1991-2020 were included. Multiple pre-, peri and post-ITx variables were collected. The experience was divided into three 10-year eras for comparison. Long-term outcomes, predictors of 1-year graft survival, and trends over time were compared using standard statistical methods.

**Results:** 132 patients received 155 ITx including 38 isolated ITx, 78 liver-ITx, 28 multivisceral and 11 modified multivisceral transplants. 58% were male, 65% were children and 78% had short-bowel syndrome IF etiologies. Median patient follow-up time was 69 months. Overall 1-year patient and graft survival was 82 and 69%. Major complications included infectious enteritis (69%), PTLT (14%), CMV tissue-invasive disease (7%), chronic mucosal inflammation (10%), one or more episodes of acute rejection (73%), and chronic rejection (15%). Significant univariate predictors of 1-year graft survival include: age, graft type, ischemia time, PRA, DSA, crossmatch, immunosuppression, and era.

In comparing the 3 decades, the second era had the highest ITx volumes. The number of adult recipients and the number of recipients transplanted from home increased over time. The graft types shifted from liver-inclusive to non-liver inclusive and the survival improved over time. (Table 1).

**Conclusion:** This large, single center, 3 decade experience demonstrates important outcomes and trends. Importantly, ITx outcomes have improved significantly over time despite the development of major immunologic, infectious, and malignant complications.

**TABLE 1.**

Era	Overall	1991-2000	2001-2010	2011-2020	p-value
		n=21	n= 79	n=55	
Pre-ITx	n= 28/	n=7/8/6	n=11/21/47	n=10/9/36	p=0.03
Location (ICU/Ward/ Home)	38/89				
Age at ITx (Pediatric/ Adult)	n= 100/55	n= 13/8	n= 58/ 21	n= 29/26	p=0.05
Graft Type (isolated ITx, OLT-ITx, MVTx, mMVT)	n= 38/78/ 28/11	n=3/11/ 0/1	n=19/47/ 10/3	n=16/14/ 18/7	p<0.0001
1 & 5 year Patient Survival %	82 / 65	65 / 41	82 / 69	82 / 66	p=0.07
1 & 5 year Graft Survival	69 / 55	52 / 33	65 /54	80/ 61	p=0.03