TRANSPLANTATION

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Complications from PN for irreversible intestinal failure are the most well-established indications for intestinal transplantation - (Table 91.1). Short bowel syndrome (SBS) is the most frequent cause for the need for PN. The aetiologies of SBS vary between the adult and paediatric population. The most common causes for SBS in the paediatric pop - ulation are volvulus, gastroschisis, necrotising enterocolitis and intestinal dysmotility or pseudo-obstruction. The last two result in functional SBS. The most common causes for SBS in adults result from bowel resections owing to mesenteric ischaemia, inflamma - tory bow el disease (most commonly Crohn’s disease), benign tumour resection and dysmotility or pseudo-obstruction. Until recently , intestinal transplantation was only consid - ered for patients with complications of PN, including loss of - vascular access, recurrent life-thr eatening line infections (espe - - cially fungal infections) and IFALD. Increasingly patients are being transplanted for quality-of-life indica tions, although this remains controversial. /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF If the indication for transplant is IFALD, the degree of liver impairment influences the organs required at transplant. Mild to moderate liver fibrosis may allow an isolated intestinal transplant to be undertaken. This results in improved patient outcomes, better organ utilisation and reversal of liver fibrosis with discontinuation of PN. Severe liver fibrosis or cirrhosis will necessitate a liver-containing graft. Indications for intestinal transplantation continue to change and now include to facilitate the resection of some tumours (desmoids and pseudomyxoma peritonei). In this situ a tion, without intestinal transplantation, extensive evisceration would render the patient dependent on PN. Hepatic cirrhosis with extensive portomesenteric thrombosis may make isolated liver transplantation technically impossible , so multivisceral transplantation may be considered for some individuals. Acute widespread splanchnic ischaemia (arterial and venous) is a rare but growing indication for super-urgent intes tinal and multivisceral transplantation as well as other acute abdominal catastrophes.

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Life-threatening complications of parenteral nutrition a. Progressive IFALD or non-IFALD Assessed by biochemistry and biopsy Combined intestinal and liver transplant is best considered in the presence of advanced liver disease (portal hypertension or advanced /f_i brosis) b. Severe sepsis More than one life-threatening episode of catheter-related sepsis for which no remediable cause can be identi /f_i ed Endocarditis or other metastatic infection c. Limited central venous access Venous access limited to three major conventional sites in adults (above and below the diaphragm) and two major conventional sites above the diaphragm in children Conventional central venous sites are de /f_i ned as internal jugular, subclavian and femoral veins 2. Very poor quality of life thought likely to be correctable by transplantation 3. Surgery to remove a large proportion of the abdominal viscera considered untenable without associated multivisceral transplantation (e.g. extensive desmoid disease, extensive critical mesenteric arterial disease) 4. Localised malignancy considered amenable to curative resection requiring extensive evisceration (e.g. localised neuroendocrine tumours). Particular caution should be exercised in this group and patients should be discussed in a multidisciplinary multicentre forum (e.g. National Adult Small Intestinal

Transplant [NASIT] forum) 5. Where the transplantation procedure is expected to preclude the possibility of future intestinal transplantation (e.g. loss of venous access or further human leukocyte antigen sensitisation) 6. Where the need for subsequent intestinal transplantation is considered likely and the risk of death is increased by excluding the intestine from the graft Examples include predictable problems related to administering immunosuppression (e.g. line sepsis), or continuing severe intestinal disease such as diabetic visceral neuropathy , or ultra-short bowel syndrome, which may cause /f_l uid, electrolyte and acid–base balance problems that would damage an existing or planned renal graft 7. Transplantation of additional organs for feasibility reasons a. Renal transplantation b. Adults and children with corrected GFR of <45 /uni00A0 mL/min/m GFR, glomerular /f_i ltration rate; IFALD, intestinal failure-associated liver disease. Adapted from NHS Blood and Transplant (https://www.odt.nhs.uk/transplantation/small-bowel/).

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