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WHAT IS INTESTINAL FAILURE?

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DEFINITION

- "The reduction of the digestive function below the minimum necessary for the absorption of macronutrients and/or water and electrolytes, in such a way that intravenous supplementation (saline solution and/or parenteral nutrition) is required to maintain health and growth."

Pironi L, et al. ESPEN endorsed recommendations. Definition and classification of intestinal failure in adults. *Clinical Nutrition*. 2015; 34:171-180.

FUNCTIONAL CLASSIFICATION

- **Type I:** relatively frequent and self-limiting. It can occur after a wide range of abdominal surgeries or other pathologies that affect the correct gastrointestinal function. Only saline solutions and/or Parenteral Nutrition (TPN) will be required for short periods.
- **Type II:** Less frequent but more severe. It includes the infectious, metabolic and nutritional complications following extensive surgical resections. TPN will be needed for weeks or months.
- **Type III:** Chronic Intestinal Failure. It is one that needs prolonged or permanent TPN due to its severity.

CHRONIC INTESTINAL FAILURE

- It is the less frequent organic failure.
- In Europe, the prevalence of chronic intestinal failure due to benign disease has been estimated to range from 5 to 20 cases per million inhabitants.
- In Spain, according to the 2016 NADYA register, there were 286 patients with NPD, 252 adults and 34 children.
- 37.3% cases in adults and 64.7% in children corresponded to patients with SIC.
- Type III intestinal failure due to benign causes is considered a Rare Disease.

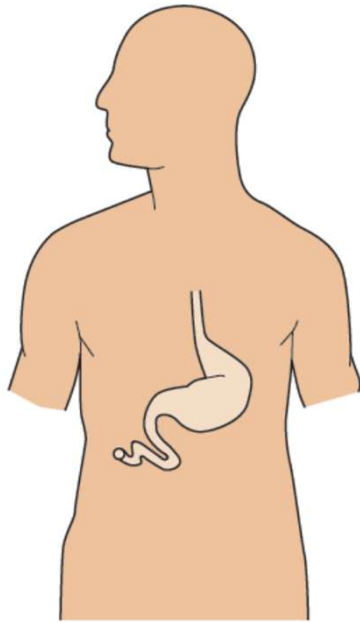
MAIN CAUSES OF INTESTINAL FAILURE

- Short bowel (the most common in adults and children)
- Enterocutaneous fistula
- Alteration of gastrointestinal motility
- Mechanical obstruction
- Affection of the small intestine mucosa (with decreased absorption or increase of loss)

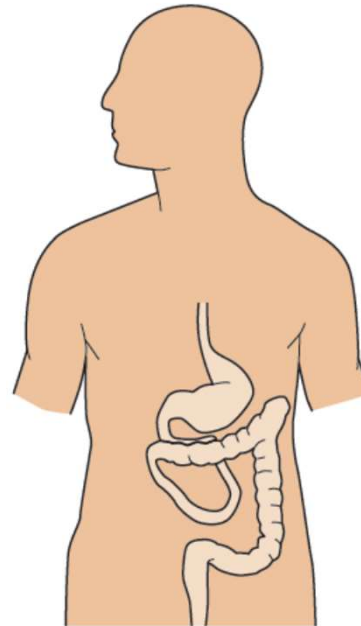
SHORT BOWEL SYNDROME (SBS)

- SBS is the main cause of patients with type III intestinal failure in Europe:
 - 75% of adults with type III intestinal failure
 - 50% of children with type III intestinal failure
- SBS is a clinical picture of malabsorption that is characterised by the extreme reduction of effective intestinal absorption surface.
- It is defined as a disorder associated with a small intestine remains of less than 200 cm.
- The most frequent causes of SBS in the adult population are: mesenteric ischemia, Crohn's disease, necrotising enterocolitis and post-surgical complications.
- The most frequent causes of SBS in the child population are: intestinal malformation, intestinal volvulus and necrotising enterocolitis.

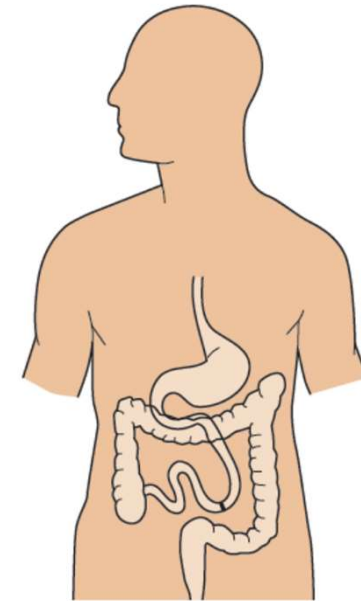
TYPES OF SHORT BOWEL SYNDROME (SBS)



Enterostomy



Jejunal-colonic anastomosis



Jejunal-ileal-colonic anastomosis

RESECTION

Jejunum-ileum-colon

Ileal-colonic

Jejunal

TREATMENT OF INTESTINAL FAILURE

- **Fundamental nutritional support: Home Parenteral Nutrition (HPN)**
 - Enteral nutrition and oral diet, depending on the clinical situation and intestinal adaptation
- **Drugs:**
 - Antidiarrhoeals
 - Proton pump inhibitor
 - Analgesics
 - Growth factors
 - Specific for the following complications: infectious, hepatic/bone pathology, mood affectation, etc.
- **Surgical techniques:**
 - Reconstructive
 - Intestinal transplantation

CONCLUSIONS

- The profile of patients with chronic intestinal failure is very heterogeneous and encompasses a great diversity of diseases, length and functional capacity of the remaining intestine, as well as different psychosocial characteristics.
- Patients with CIF suffer malabsorption of macronutrients, micronutrients, electrolytes and water, which can lead to malnutrition, diarrhoea and dehydration.
- The resulting malnutrition in these patients leads to weight loss.
- Nutritional support (HPN/saline solutions) should be adjusted to the needs and clinical situation of each patient.

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