

A NUTRITIONAL APPROACH IN PEDIATRIC PATIENTS WITH POST-SURGICAL SHORT BOWEL SYNDROME

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Background and aims

Short-Bowel-Syndrome(SBS) is a severe congenital or acquired condition that induces bowel structure and functional's alterations. This disease determinates malabsorption and increments risk of macro- and micronutrient deficiencies: its therapy is focused on a pharmacologic and personalized nutritional support. SBS's patients usually start Parental Nutrition (PN) at hospital and, when all parameters optimally fit individual needs of nutrients, they can be discharged with a customized Enteral-Nutrition (EN) program (associated or not with partial PN). This condition often requires long term personalized Home Parental Nutrition (pHPN) and the Hospital Pharmacy's PN laboratory can offer an important support to personalize the nutritional program (Graphic 1).

Method

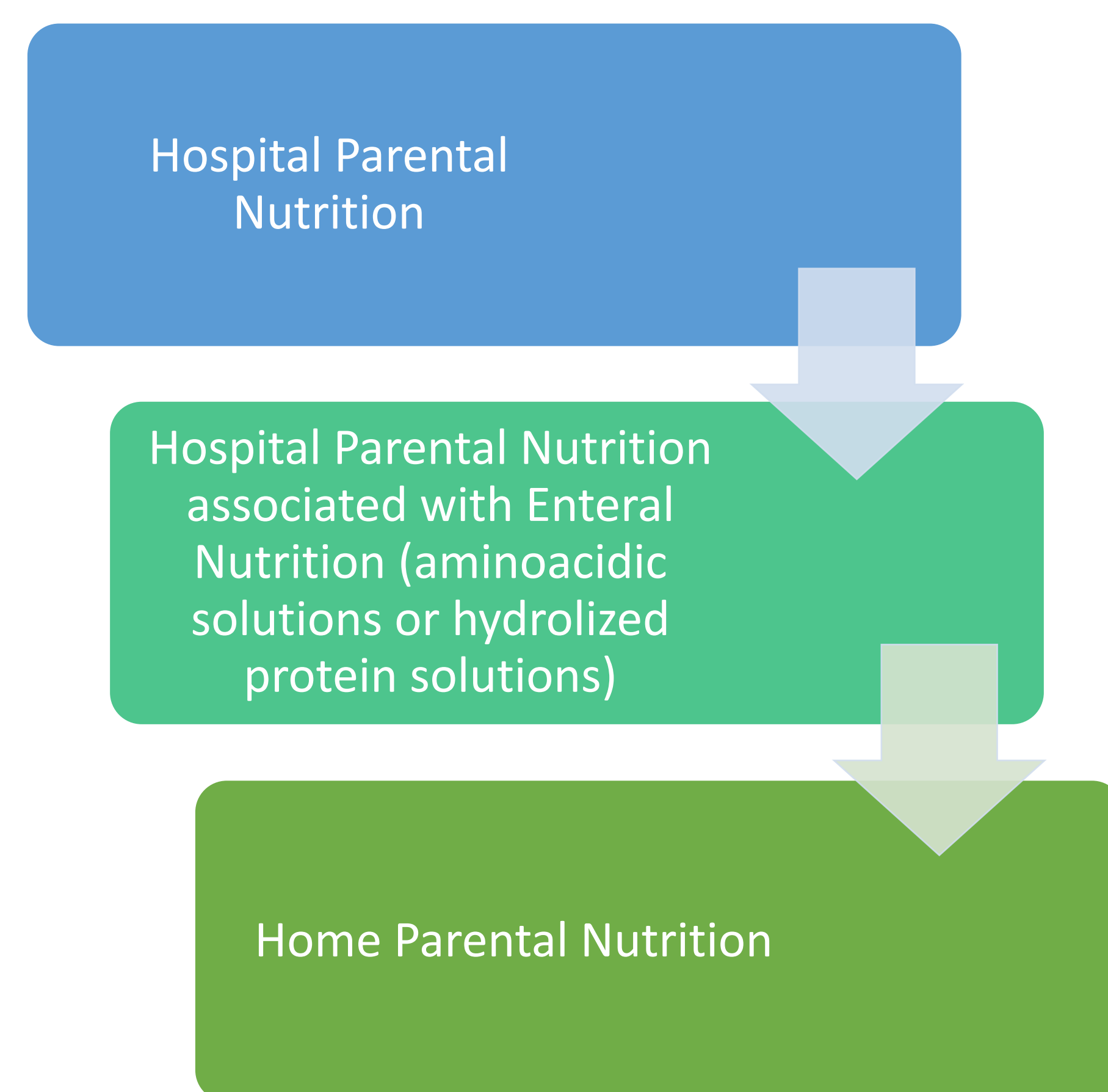
Starting from a retrospective analysis of post-surgical SBS's paediatric patients in the last 15 years, we resumed how many patients required pHPN. We collected their clinical, auxological, nutritional data and we analysed their nutritional management from birth to home discharge.

Results

In the last 15 years, 13 post-surgical SBS's paediatric patients were treated in an Italian-Paediatric-Hospital (54% male and the mean of weeks of gestation at birth was 35): 4(30%) of them required pHPN. They were all initially treated at the Neonatal Intensive Care Unit (NICU) and started personalized PNs managed by an interdisciplinary team composed by a neonatologist, a paediatric gastroenterologist and a surgeon. Personalized PNs were prepared using a neonatal aminoacidic solution composed by 6% auxological aminoacids and lipidic emulsions containing Medium Chain Triglycerides(MCT) or enriched with fish oil to avoid colestasis; PNs were composed with 30% lipids/ 70% glucides. Surgical resection was performed at the median age of 2,5 months due to their conditions (for example Necrotizing Enterocolitis or Intestinal Atresia or Agangliar Megacolon) than they started an EN's program associated with PN (3 patients received enteral aminoacidic solutions, 1 hydrolized protein solutions). In order to improve their quality of life they received a home health care assistance to manage pHPN. The physician monitored clinical and laboratory parameters weekly, vitamins and trace elements' blood concentration three monthly to adjust pHPN. 3 patients stopped pHPN at 2 years old, 1 is still in pHPN at 18 months of age.

Conclusion

Post-surgical SBS is one of the major cause of intestinal failure and this structural and functional changes determinate risk of malnutrition. For those patients an interdisciplinary approach and a personalized nutritional program is essential to avoid the risk of malnutrition.



Graphic 1

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