

NEWS RELEASE

Nutritional management of children with gastrointestinal Impairment – key to clinical outcome

- ***Addressing malnourishment in Paediatric ICU vital***
- ***More studies essential to strengthen guidelines and protocols***
- ***Establishing oral nutrition vital for Short Bowel Syndrome patients***

Vevey, Switzerland, May 2013 – Speaking at a Nestlé Nutrition Institute symposium on paediatric gastroenterology (ESPGHAN*), experts called for greater emphasis on improving the nutritional status in children with Gastrointestinal (GI) Impairment. They argued for more relevant research to create stronger evidence-based feeding guidelines and protocols that can be applied by appropriately structured multi-disciplinary teams.

Ensuring optimum nutrient intake in children with gastrointestinal impairment can help improve their overall condition. For example, in the ICU setting, it can reduce the incidence of complications and the need for dependency on mechanical ventilation, as well as shortening length of hospital stay and even reducing death rates.

Optimal Nutritional Therapy in Critically ill Children - an Important Goal

Dr Hulst, from Sophia Children's Hospital in Rotterdam, emphasised that achieving optimal nutritional status – meeting energy and protein requirements – is a fundamental goal in paediatric intensive care, because malnutrition can affect the clinical outcome. Frequent feeding interruptions due to diagnostic tests and problems associated with the treatment of serious illness such as restricted fluid intake and the use of vaso-active drugs – are other barriers to the achievement of nutrient goals. In fact, at least 25% of children admitted to paediatric intensive care units are malnourished, with greater incidence in children under 2 years old. Paediatricians therefore face the challenge of restoring them to nutritional homeostasis – as an essential part of the care regimen - in order to give them the best chance of recovery.

Dr Peter Sullivan, Reader in Paediatrics at Oxford University, UK, highlighted the complexity of addressing the nutritional needs of neurologically impaired children who often suffer from gastro-intestinal (GI) issues such as foregut dysmotility, gastro-oesophageal reflux (GORD), delayed gastric emptying, retching and dumping. Additionally, children with cerebral palsy may have a range of oral-motor dysfunctions leading to feeding insufficiency, including poor lip closure, uncoordinated swallowing and choking. Chronic constipation is common, with a prevalence of 26% to more than 50%. The causes are multifactorial and include extended periods of immobility, skeletal abnormalities, extensor spasm or generalised hypotonia, and impaired bowel motility associated with specific neurological lesions. Dr Sullivan added: "Inadequate or delayed assessment of nutritional requirements is, in itself, a major barrier to neurologically impaired children reaching EN goals."

More Relevant Studies Essential for Stronger Guidelines and Feeding Protocols

Looking towards the development of nutritional strategies for critically ill children, Dr Hulst highlighted that due to limited relevant studies it remains unclear how early or aggressively nutritional support should be given. "The current 'state-of-the-art' of nutritional support in critically ill children is fundamentally based only on expert opinions, on extrapolations from adult studies and from studies in non-critically ill children. Not surprisingly, guidelines on nutrition in critically ill children are currently inadequate."

Assessing the only two relevant Random Controlled Trials (RCT) to date, Dr Hulst's view was that they suggested that early administration of a protein energy-enriched formula in critically ill children is well tolerated and, importantly, increases energy and helps conserve or restore protein body mass. Dr Hulst added that future studies should establish parameters of tolerance for EN that can help in future daily decision making in specific patient groups, including when to start, which route to feed and what type of feeding to prescribe.

The current ASPEN and ESPGHAN/ESPEN guidelines recommend enteral nutrition in preference to parenteral whenever possible in critically ill children who have a functioning GI tract, but acknowledge that there are insufficient data to make evidence-based recommendations for macronutrient intake. It is generally acknowledged that parenteral nutrition is associated with more complications, higher risk of overfeeding and higher costs than enteral nutrition, but that many critically ill children have impaired oral capabilities and/or GI function, leading to failure of the enteral feeding route.

Insights into Short Bowel Syndrome Nutritional Strategies

Professor Olivier Goulet, Hôpital Necker-Enfants Malades, University of Paris Descartes, France, highlighted the problems experienced by children who have undergone resection of the small intestine – a condition called short bowel syndrome (SBS). Nutritional consequences include loss of water electrolytes, poor absorption of macronutrients, and deficiency of vitamins and trace elements. Both growth and development of the child as well as gut adaptation should be considered as the primary synergistic outcome parameters of individualised nutritional strategies.

Professor Goulet, explained the nutritional management aims: “Parenteral nutrition can act as an important time bridge to maintain growth and development. However, it is important to establish oral nutrition as quickly as possible. This will encourage physiological intestinal adaptation which helps prevent intestinal failure or problems associated with parenteral nutrition, such as catheter-related sepsis and thrombosis. The epidermal growth factor from saliva that is released in oral feeding might play a key role in intestinal adaptation after SBS resection. The importance of choice tube fed formula and taste acceptance, digestive tolerance and efficiency are key to successful feeding strategies for these patients.”

Professor Goulet echoed Dr Hulst’s call for more nutritional studies, specifically in relation to the needs of SBS patients. This would help guide practitioners understand and adopt optimal type nutrition strategies that would be appropriate for patient types and intestinal status.

Multi-disciplinary team approach required

Reflecting the importance of optimal nutrition to patient outcome and the complexity of care for children with gastrointestinal impairment, all of the experts agreed on the need a multi-disciplinary approach to develop and deliver a successful targeted feeding strategy. This was articulated by Dr Sullivan in relation to neurologically impaired children with gastrointestinal challenges. “A multi-disciplinary team approach is needed to provide optimal care, with a core team comprising a paediatric gastroenterologist, a paediatric dietician and a clinical nurse specialist.”

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Notes to editors:

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Link to the Symposium [Abstract](#):

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