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Commentary

Enteral Nutrition (NE) and its Vast Support

Miguel Ángel Pedraza Zárate*

Education, IMSS, Mexico

***Corresponding Author**: Miguel Ángel Pedraza Zárate, Education, IMSS, Mexico.

Received: March 14, 2020; **Published:** April 28, 2020

Enteral nutrition (NE) is a measure of nutritional support through which nutrients are introduced directly into the digestive tract, it is used when there is some difficulty for normal ingestion, it is capable of meeting the objective of preventing malnutrition and correcting nutritional problems when they exist and thus avoid self-cannibalism (consumption of the proteins themselves), avoid the side effects of intestinal rest such as nutritional disorders, vitamin disorders, intestinal motility disorders, enterocyte atrophy, bacterial translocation, disorders of digestive motility, high risk of digestive bleeding, bacterial overgrowth, problems in the reintroduction of nutrition once the patient has healed and bloating, etc [1].

It provides nutrients in the digestive tract through the oral route or by tube and is indicated in patients with a full gastrointestinal tract who require support due to swallowing disorders, limitation of intake, or requirement for continuous infusions due to therapeutic indications. It is an intervention therapy with benefits for the patient; however, adverse reactions to enteral nutrition mix, feeding tubes, infusion devices, type of infusion (continuous or bolus), or drug-nutrient interactions may occur [2].

The European Society for Parenteral and Enteral Nutrition (ESPEN) classifies enteral formulas into:

1. Standard formula: Contains the amount of nutrients according to the recommendations for a healthy population, they have intact protein and lipids in the form of long-chain triglycerides, with or without fiber. Generally, does not contain gluten or lactose.
2. High, normal or low energy formula: The normal provide 0.9 to 1.2 kcal/ml.
3. Hyperprotein formula: Protein content equal to or greater than 20% of the total energy [4]. Formula with high lipid content. Contains over 40% of total energy in the form of lipids.
4. Formula with a high content of monounsaturated fatty acids (MUFA). Has 20% or more of the total energy of the MUFA.
5. Formulas for specific pathologies.
6. Immunomodulatory formula.
7. Formulas with intact protein, synonymous with polymeric.
8. Peptide formula: The protein is in the form of peptides (chains of 2 to 50 amino acids). Synonymous with oligomeric or low molecular weight.
9. Free amino acid formula: Synonymous with elemental, monomeric, low molecular weight.
10. Formulas with fiber or without fiber: They differ in the type of soluble or insoluble fiber [3,4].

The different existing enteral nutrition formulas, both artisanal and commercial, make the intervention in the patient with various pathologies more specific, with different amounts of macronutrients, some with low amounts of protein, others with high contributions of lipids, modified in energy density, modified in micronutrients such as potassium. Nutritional intervention via the enteral route, using special formulas for various pathologies, makes it possible to advance in nutritional support and improve patient outcomes [2].

The physiological incompatibility occurs as a result of a non-pharmacological action of the active ingredient or components of the drug formulation and consequently results in decreased tolerance to nutritional support, leading to gastrointestinal disturbances (diarrhea, bloating). An example of physiological incompatibility is given by the osmolality of sorbitol, contained in liquid presentations, which generates osmolarities greater than 600 mOsm/Kg, which is tolerable for the small intestine; in order to reduce osmolality prior to administration by enteral tube, it is diluted with the amount of water calculated to bring it to isotonicity and, if it does not achieve adequate osmolality, it should be decided to use alternative medications [5].

The drug-nutrient interaction must be considered during the NE infusion. The dynamics of the drug interferes with the clinical and physiological outcome in the patient, the arrangement of the nutrients can affect the drugs or the nutrients can be affected by the drugs and the risk of developing adverse reactions; the route, dose, time of drug administration in relation to nutrition, as well as the physicochemical characteristics of the drug and its presentation determine the interactions, so we must identify the possible mechanisms of drug-nutrient interactions, dilutions optimal times of administration and medications to control risks [6].

The evidence reflects the relevance, importance of the NE. Zhong JX., *et al.* included in a meta-analysis 3831 patients, concludes that perioperative nutritional support was superior to improve clinical results in malnourished patients, which could significantly reduce the incidence of complications and effectively shorten the length of hospital stay [7].

Patient populations that have difficulty digesting or absorbing standard diets can achieve better health and nutritional outcomes through the use of semi-elemental diets [8].

EN is a valuable clinical intervention for patients of all ages in a variety of care settings. Along with its many result benefits, there is a possibility of adverse effects. These safety issues are the result of clinical complications and process related errors. The latter can occur at any step, from patient assessment, prescription, and order review, to product selection, labeling, and administration. To maximize the benefits of EN while minimizing adverse events requires a systematic approach to care. This includes open communication, standardization and incorporation of best practices in the EN.5 process.

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Volume 15 Issue 5 May 2020