

Nutritional support: back to the past

***“A necessidade não tem lei,
mas a da fome sobre todas pode”
 (“Necessity knows no law, but hunger
supersedes them all”) – popular adage***

The prevalence of protein-calorie malnutrition in hospitalized patients has remained high in the last fifteen years (50% Hill, 1977, 30% to 50% Wilmore, 1992). While in some circumstances, malnutrition is apparent on admission to hospital, in others, particularly in septic syndromes and hypermetabolic traumas, it develops quickly or insidiously.

Malnutrition syndromes are not insignificant clinical-laboratory occurrences. Their unfavorable consequences have been confirmed in animal experiments and in the clinic. The simple absence of nutritional content in the intestinal lumen reduces parietal blood flow, and promotes villi (due to a lack of direct and neurogenic trophic stimuli), favoring hyperpermeability of the intestinal mucosa and accentuating the phenomena of bacterial translocation (Zaloga, 1997). Gastrointestinal insufficiency (gut failure) has other serious consequences, such as increased incidence of localized or systemic infection, resulting in loss of immunological competence of the wall of the digestive tract. A link has also been demonstrated between enteral disorder and the occurrence of multiple organ dysfunction syndrome (Lamache, 1996).

Some clinical scenarios are characterized by anatomophysiological phenomena that make the use of normal alimentary access impossible – mechanical intestinal occlusion, prolonged paralytic ileus, uncontrolled diarrhea, acute pancreatitis, diffuse peritonitis, high-debt enterocutaneous fistula, and short intestine syndrome. In these cases, to start parenteral feeding protocols (unnatural or unphysiological) is justified, which is not the case in many other situations of abusive prescription. How many patients spend the first seventy two hours of hospitalization, or postoperative



period, with 5% dextrose perfusions, subsequently switched to solutions consisting of concentrated glucose, amino acids and lipids, without the functionality of the digestive tract being minimally tested...

There are few studies that compare the advantages and the inconveniences of the enteral and parenteral routes (incidentally, they are methodologically complex), but a knowledge of the consequences of non-use of the digestive apparatus has made the selection of the enteral route a priority for nutritional support in hospital patients and in the outpatient department. There is truth in the British aphorism: if the gut works, use it or lose it. This tonic, far from constituting one of the discoveries of modern Medicine, was at the heart of diverse practices that began in Classical Antiquity. The physicians of ancient Greece prescribed enemas containing wine, milk and oats, for the treatment of diarrhea. In the last century, they used wooden syringes to cause nutrients, like chicken soup and beef, and even pancreatic extracts, to progress retrogradely (as far as the transverse colon). Some variations of the techniques of proctoclysis or enteroclysis were used (particularly for hydration) up

until the start of the II World War (Randall, 1991). The first application of a gastric feeding tube for the administration of foods was described at the end of the 16th Century (Capivaceus, 1598), but it was not until the middle of the century that semi-rigid orogastric tubes are reported that enabled gastric decompression, removal of toxic substances and administration of nutritional preparations (Kussmaul, 1867, Ewald, 1874). The earliest uses of feeding tubes in patients with anatomical or functional exclusion of the stomach were recorded at the beginning of the 20th Century (Einhorn, 1910). The aim was to pass the food directly into the duodenum or proximal jejunum. Gastrostomy and jejunostomy surgeries, and in particular, endoscopic percutaneous gastrostomy, dispense with the need for long, synthetic tubes, which are almost always traumatic and inconvenient for long-term use. But these alternatives are constantly ignored.

Another polemic was recently rekindled: when is the ideal time to start administering a diet? Traditionally, a period of fasting of four to five days was imposed on patients who had undergone surgery. But awareness of the unfavorable effects of prolonged paralysis of the digestive tract, and the harmful effects of food privation on the intermediary metabolism, led to nutrition being given earlier. While the existence of disturbances in gastric motility in the first thirty-seven hours has been proven, the small intestine functions, and it is possible to institute a diet in the first twenty-four hours with a modest debit of 20 to 30 ml/hm, if the patient is prepared for a feeding tube. These principles do not differ substantially from the recommendations of Pereira (1959) who was one of the pioneers of enteral feeding in the home by gastric tube, having used it in some of his patients with advanced neoplasias.

The variety of preparations for enteral administration by feeding tube has made the choice complex for those who are less well-informed. While polymeric formulae (said to be complete) are the object of more extensive use, the practical interest has not yet been defined for some special variants – immunomodulation diets (enriched in arginine, nucleotides, omega 3 fatty acids), stress diets (hypercalorie, hyperprotein, incorporated in branched-chain amino acids and medium-chain fatty acids), diets with glutamine or other pharmaconutrients – due to a lack of controlled, randomized studies that enable the sustained thera-

peutic benefits to be demonstrated.

The prescription of diets and the verification and monitoring of nutritional state are tasks that are the responsibility of physicians and surgeons. This dogma of general therapy is constantly undermined in favor of pharmacological or surgical intervention. The existence of strict protocols has clearly favorable effects on the quality of nutritional support in intensive care units (Adam, 1997). However, the complexity of the subject necessitates the presence of a multidisciplinary nutrition Task Force, with the responsibility for teaching and consultancy. Thus, it is with satisfaction that the publication is recorded, in this edition of journal “Medicina Interna”, of works produced by groups whose performance in this area has been enthusiastic and competent. ■



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