Enteral Nutrition: Whom, Why, When, What and Where to Feed?

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Oral and enteral nutrition (EN) affects both the anatomical and physiological integrity of the gastrointestinal tract. It down regulates systemic immune response, reduces overall oxidative stress and limits systemic inflammatory responses. It reduces bacterial translocation, limits pathogenic bacteria in the intestines and enables the production of short-chain fatty acids in the colon. Therefore, it is the most physiologic way of providing nutritional support in all patients. The enteral formulas are available as polymeric, semi-elemental, and elemental diets; commercially EN supplements are marketed in either ready-to-use, liquid or powdered form, which has to be reconstituted. They provide from 1.0 up to 2.0 kcal/ml; their pH ranges from 5.5 to 7.0 and their osmolality from 300 to 600 mosm/l (table 1). EN protocols are depicted in figure 1.The beneficial effects on the gastrointestinal tract and systemic organs of 'early' EN depend on the timing, dose, location and different modalities of enteral delivery. Being familiar with

Table 1. Types of enteral feeds

Whole protein
With or without fiber
Modified protein
Semi-elemental (di-/tripeptides)
Disease-specific nutrition
Respiratory disease (altered carbohydrate:fat ratio)
Renal disease (low in proteins/electrolytes)
Immunonutrition (glutamine, arginine and fish oil)
Hepatic disease (rich in branched-chain amino acids)
Cardiac disease (low in sodium)
HIV/AIDS (modified fats/peptides)
Milk intolerance (soy based)

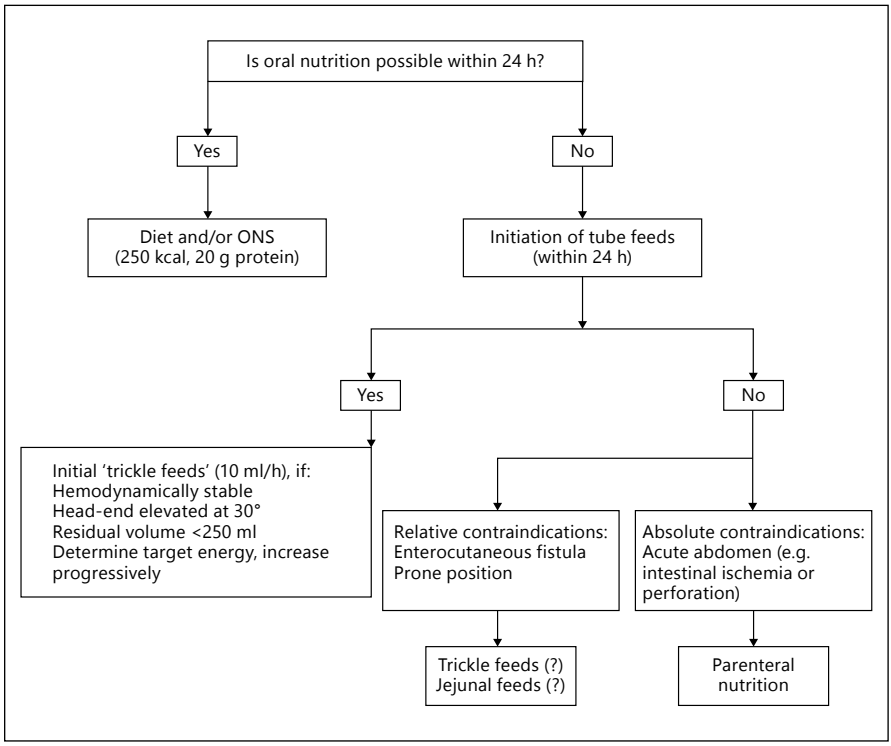

Fig. 1. EN protocols. ONS = Oral nutrition supplements.

the basic tenets of providing EN – the 'Who, Why, When, Where and What' – will result in safe nutritional interventions and achieve a positive clinical outcome.