

Editorial

THE ELEMENTAL DIET

The introduction of the elemental diet has brought about an advancement in the nutritional therapy of critically ill patients. It is composed of all essential and non-essential L-aminoacids, simple sugars, electrolytes, all trace elements and vitamins except cobalt and vitamin K. No milk products or proteins are present and the mixture is residue free.

The patients selected for this mode of feeding must have at least 100 cm of functioning jejunum or 150 cm of ileum and an intact ileocaecal valve. A very significant indication is a fistula of the small or large intestine (Himal et al., 1974). The losses through the fistula secretions make the nutritional support essential. Due to a paralytic ileus in the initial stages intravenous alimentation is used, but as soon as peristalsis returns the oral elemental feeding can be started.

In case of pancreatitis after resolution of the ileus, maximal pancreatic rest is obtained by infusing a diet into the jejunum (Ragins et al., 1973). Sterile dextrose is given for the first five days followed by quarter strength elemental diet on the sixth day.

Inflammatory intestinal disease calls for a good nutritional support along-with the steroid therapy. The elemental diet has shown exceedingly good result in such patients (Voitk et al., 1973).

The diet has been recommended for pre-operative preparation of the large intestine. It maintains nutrition and prevents bacterial overgrowth. Due to being non-allergenic it has been used in patients with malabsorption secondary to food allergies. Being free from milk products, no diarrhoea is caused and this form of nourishment is utilized in the transitional period between intravenous feedings and regular meals.

Clinical evidence has been obtained of the elemental diet protecting the intestinal mucosa from fluorouracil toxicity (Bounous et al., 1971). This is due to the quantitative reduction in the bacteria and stool bulk and an increase in the thickness of the mucous coat.

The administration of this mode of nutrition can be done either orally, intragastric or directly in the small intestine. When given orally the quantities ingested must be small as 2 ounces every hour which will prevent hyperosmolar diarrhoea, nausea and bloating. For intragastric

feeding an 8F infant feeding tube is recommended and a constant drip of the diet is started. Direct feeding in the intestine via a jejunostomy can be utilized in cases of a high small intestinal fistula.

Patients on an elemental diet regime must have a monitoring of haemogram, blood urea nitrogen, creatinine, glucose, electrolytes and prothrombin time twice weekly. Intake output records must be maintained. Diarrhoea accompanied with abdominal cramps, distension and nausea may complicate the situation. This may be controlled by reducing the rate and adding antidiarrheal agents. Aspiration pneumonitis especially in elderly or unconscious patients may be encountered. The position of the tube should be checked roentgenographically and the head of the patient kept in an elevated position. Potassium supplements may be needed especially in patients receiving diuretics.

With the distinct advantages over intravenous feedings with regard to risk of septicaemia and being more complete by providing adequate nutrition for growth, the elemental diet is now frequently used in debilitated patients. It is never-the-less important to observe the biochemical status of the patient and keep a strict supervision to prevent any complications.

References

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