

Meeting abstract

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Total parenteral nutrition in major surgery: role in geriatric age

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Objectives

Many studies demonstrate that malnutrition in geriatric patient suitable for major surgery is an important risk factor for the onset of operating complications and for the increase of mortality range. The aim of this study is to value if an appropriate nutritional support allows a better metabolic recovery of the geriatric patient in order to decrease post-operating morbidity and mortality.

Materials and methods

A retrospective evaluation has been executed on 180 patients who underwent surgery because of neoplastic pathology – eighty-one of these patients aged 65 and over (65–88 range). Nutritional risks have been estimated by anthropometric (tricipital fold, circumference arm), bio-humoral (serum albumin levels, transferrin level) and immunological (lymphocytes/mm³) parameters.

Malnutrition indexes were: weight loss higher than 10% compared to usual weight; albumin level lower than 3 g; an iron-binding capacity lower than 220 mcg. The prognostic nutritional index (PNI) has been calculated too by Mullen.

There was malnutrition in 69% of patients with neoplastic pathology; 67% of whom suffered from malignant neoplastic pathology of the gastroenteric apparatus. Within the group including undernourished patients, who were neoplasm carriers, the following rate per cent has been observed: 6.6% esophageal pathology; 14.4% gastric neoplasm; 33.3% colic neoplasm. With regard to malnutrition patients were divided into three groups: 19% of the

patients had slight malnutrition; 61% had a moderate malnutrition and 20% had a serious malnutrition. All patients with average-high malnutrition, after the introduction of a central venous catheter, have been treated with total parenteral nutrition since the previous operation day for about 11 days in post-operating time (10–15 days range), until the restarting of feeding appropriate to metabolic requests.

Results

Malnutrition correction with total parenteral nutrition in elderly patients undergoing surgery for gastroenteric malignant neoplasm, allowed metabolic homeostasis by a control of the hyper catabolic state and the following attainment of nutritional recovery. All patients had a precocious canalization. Post-operating mortality was 0%. No major post-operating complications were observed. Only 4% of the patients had complications due to total parenteral nutrition (pneumothorax, catheter infections, hyperglycemia, hypophosphatemia).

Conclusion

Thanks to the modern discoveries in anaesthesiology and in surgery, today more and more old patients can undergo major surgery for neoplastic pathology. However geriatric patients often have an average-high malnutrition level partly due to neoplastic cachexy and partly due to physiological deterioration caused by the age and concomitant pathologies too. The most important clinical manifestations of protein-caloric malnutrition are the decrease of immunity feedback, the increase of infections and the decrease of gastroenteric motility. The pre-operating study

of all patients is useful, in our opinion, in order to evaluate the malnutrition rate and to plan the best therapeutic treatment. Malnutrition correction will be effected through either enteral or parenteral way. Even if today malnutrition support of gastroenteric neoplasm is increasingly entrusted to enteral way, defined well-born, safe, effective and cheaper, in many cases parenteral nutrition turns out to be more rapid and easier to use because it does not require a long period of induction to reach a suitable caloric standard. So, overcoming malnutrition seems necessary, especially in geriatric patients who have to undergo major surgery, to decrease pre-operating complications, mortality and to warrant more rapid functional recovery.

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