

CORRESPONDENCE

PERIOPERATIVE MEDICINE

How long should the pre-operative fasting time be in patients with enteral tube nutrition?

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Summary: The authors have touched a very important aspect of anesthesia and surgical practice, regarding the period of preoperative fasting for patients who are on enteral feeding. The authors recommend a fasting time between 45 min and 4 h (if the airway is to be manipulated during the procedure), is adequate to perform surgical procedures in patients with enteral tube nutrition. In other patients gastric suctioning before the procedure might be adequate.

Key words: Adult; Elective Surgical Procedures; Enteral nutrition; Fasting; Humans; Intensive Care Units; Nutritional Status; Practice Guidelines as Topic; Preoperative Care / methods; Preoperative Period; Critical Illness / therapy; Patient Safety; Risk Management

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Currently there is variable consensus and clinical practice guidelines on preoperative fasting indicated for surgical procedures in otherwise 'healthy' patients. Likewise, different fasting times have been advocated for different types of foods in patients without coexisting diseases, and who have enteral nutrition and who must be taken to surgical procedures.¹ However, there is no clinical practice guideline or international consensus based upon scientific evidence, regarding preoperative fasting in patients on enteral feeding through the nasogastric tubes or through a gastrostomy. Therefore, a need was felt to identify the relevant fasting time in patients with enteral nutrition without affecting the caloric and nutritional intake necessary for their pathological condition.

The research presented by Jenkins et al, established three changes in the intervention group suggested by 'Enhanced Protein-Energy Provision via the Enteral Route Feeding Protocol' (PEP uP); these changes suggested that enteral nutrition should be continued until the start of the procedure or transfer to the operating room in those procedures not related to the airway, that before the procedure the gastric content should be aspirated, in case the airway is going to be manipulated during the procedure, the patient must fast for 6 h. The results showed that the patients who followed the new protocol achieved 84% of the nutritional goals, compared to the control group who achieved only 76% of the nutritional goals. On the other hand, the intervention group had 27 h of interruption of enteral

nutrition while the control group had 46 h of enteral nutrition.² The findings of a previous study correlate with another investigation, where a reduced fasting protocol (45 min and 0 min) was applied in patients undergoing tracheostomy or gastrostomy (after aspiration of gastric contents). The results obtained by the investigators demonstrated that there was a significant increase in caloric intake in patients with reduced fasting, without an increased risk of aspiration, any medical complication or infection.³

An investigation carried out in patients in an intensive care unit (ICU), suggested that when tracheostomy, airway procedures, extubation or laparotomy or abdominal procedures are planned, enteral nutrition should be suspended 4 h before; and for taking images, it must be suspended 2 h before. It also recommended that after non-abdominal surgery or imaging procedures, enteral nutrition should be restarted immediately and that after surgery with an unprotected airway or extubation, nutrition should be restarted 4 h after the procedure.⁴

Regarding the differences between gastric enteral nutrition compared to post-pyloric enteral nutrition, a meta-analysis showed that there wasn't any difference in terms of the risk of aspiration and vomiting, but it did conclude that patients with post-pyloric nutrition had a lower incidence of nosocomial pneumonia than patients with gastric nutrition.⁵

Although the scientific evidence on fasting time in patients with enteral tube nutrition is limited, different

studies agree that reducing fasting time reduces the risk of low caloric intake in patients, who are usually in the ICU and who have high nutritional needs during their hospital stay. Similarly, the reduction in fasting time in patients with an enteral tube has not been related to a higher rate of complications; however, suctioning of residual gastric content prior to surgical procedures has been recommended.

In conclusion, a fasting time between 45 min and 4 h (if the airway is to be manipulated during the procedure), is adequate to perform surgical procedures in patients with enteral tube nutrition, in this way it achieves nutritional goals of patients in the ICU without a higher rate of intraoperative and postoperative complications.

Conflict of interest: None declared by the authors.

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