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# The feasibility of an essential amino acid supplement for addressing protein and energy deficiencies in postoperative elective and emergency colorectal patients

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## Background

Patients undergoing abdominal surgery are likely to have sarcopenia and reduced appetite, while associated energy and protein intake deficiencies can pose an issue to older surgical patients. Protein enhances satiety, so it has the potential to exacerbate energy deficiencies. Essential amino acid (EAA) supplements have been proposed as acceptable alternative means to address protein deficiencies since they do not suppress appetite in older adults (Ispoglou et al., 2021).

## Objective

*To investigate the feasibility and acceptability of a nutritional supplement in two groups of surgical patients.*

## Methods

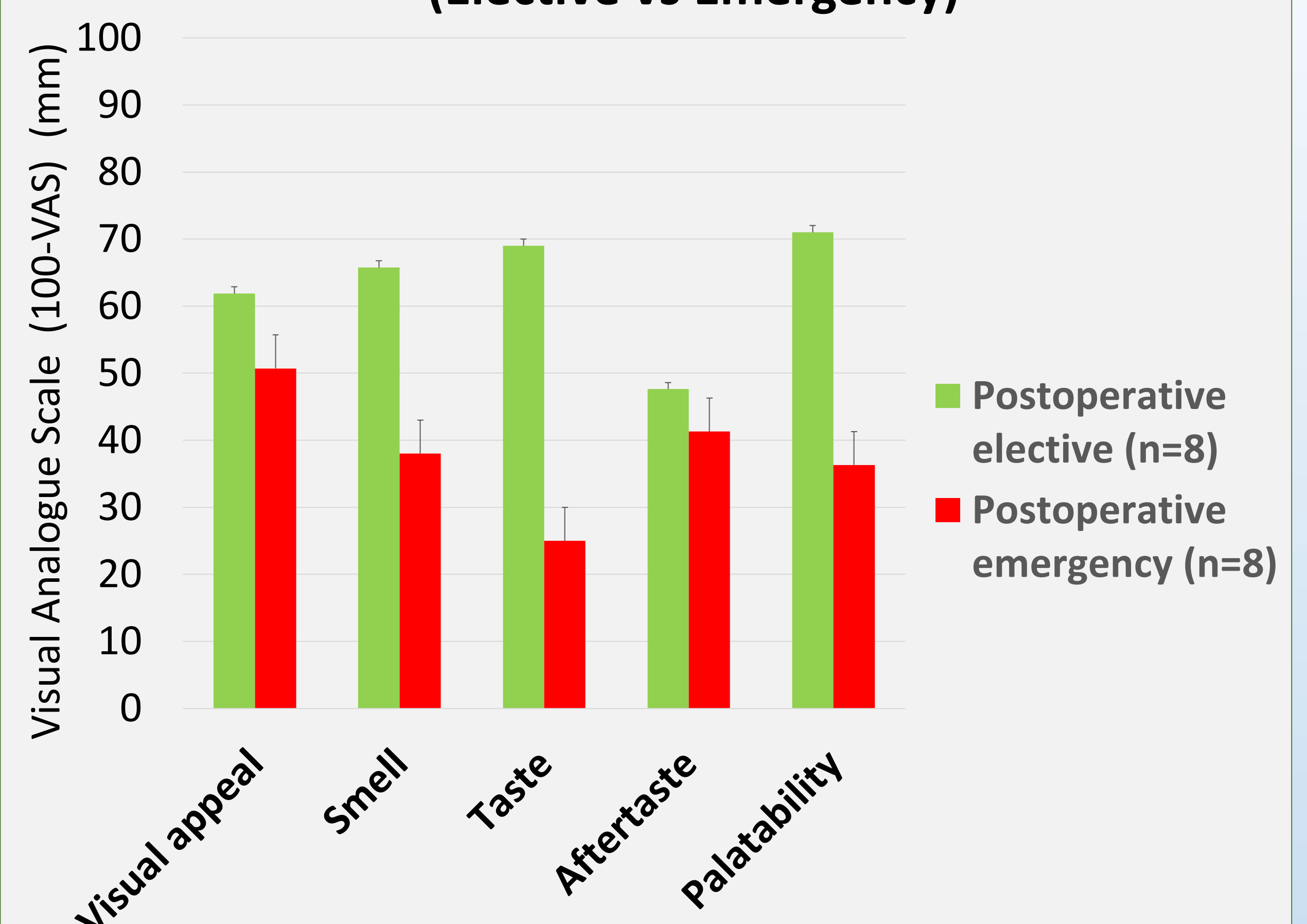
- ❑ A feasibility study was conducted in older (>60 years) postoperative elective (n=8) and emergency (n=8) abdominal surgery patients.
- ❑ A 65ml gel-based supplement containing 7.5g of essential amino acids and 500 IU cholecalciferol (*Vitrition UK Ltd.*) was given to both groups of patients.
- ❑ Mean palatability scores of the supplement were obtained using visual analogue scales (VAS) (Flint et al. 2000) and then subtracted from 100 so a higher score is a positive indicator of palatability outcomes. Patients were then asked to consume the gel twice daily for four weeks.

Higher score more favourable (100-VAS)

## Results

- ❑ Sixteen patients (5 female and 11 male) with a mean age of 68.8 ( $\pm$  6.3) years completed palatability assessments.
- ❑ Elective patients found the gel more acceptable than the emergency patients, as evidenced by the higher measurements (100-VAS) on the inverted VAS graph.
- ❑ Half of the elective patients complied with regime, one patient completed two weeks, two completed five and ten days and one patient withdrew. The emergency patients contrasted with elective patients where one person completed the regime.

Mean Palatability Scores of Postoperative Patients (Elective vs Emergency)



## Conclusion

The acceptability of the supplement and compliance with the postoperative regime was better in the elective patients. Postoperative taste is known to alter following colorectal surgery (Welchman et al, 2014), but it has not been previously identified that postoperative patients' taste may differ in elective or emergency cases. Our palatability assessments suggest that a bitter aftertaste, likely due to the addition of EAAs, was more evident to the emergency patients.

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