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## Metoclopramide in the critically ill

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## Comments

Although only a small number of patients were studied, it is reassuring that the commonly used prokinetic agent on the ICU, metoclopramide, does retain its effects on gastric emptying in this population. However it is only weak supportive evidence that the proper establishment of enteral feeding is hastened. Larger controlled studies with comparisons to other prokinetic agents are still needed.

## Introduction

Impairment of gastric motility is frequently encountered in the intensive care unit (ICU) due to a multitude of factors. Although gastric emptying may be impaired, small bowel absorptive capacity is often preserved. Early enteral feeding to ICU patients may prevent translocation of bacteria and endotoxin, and stress ulcers, and so the promotion of gastric emptying is to be encouraged. Metoclopramide is a prokinetic agent which may be useful in this setting.

## Aims

To assess whether metoclopramide improves gastric motility in the critically ill.

## Methods

Over a two day period, 10 patients receiving enteral feed on the ICU were randomised to receive 10 mg metoclopramide IV or placebo on the first day, followed by placebo or metoclopramide on day two. Administration of the study drug coincided with the commencement of nasogastric feeding for a 5 h period, and gastric emptying was assessed on each day by measuring the area under the plasma

paracetamol absorption curve at 120 min (AUC120) following a 1.5 g bolus of paracetamol nasogastrically. Gastric aspirates and pH were measured before administration of the study drug and at the end of the feeding period. Other factors that may have affected gastric emptying were controlled for during the trial period.

## Results

Following metoclopramide there was a significant increase in gastric emptying when comparisons of AUC120 were made, although residual gastric aspirates did not correlate with this increase in gastric emptying.

## Discussion

Interestingly those patients who were given metoclopramide on day one had greater AUC120 following saline than the other group, suggesting that the clinical effect of metoclopramide may last longer than its known pharmacological effect. High residual gastric aspirates do not necessarily mean absent gastric motility. In the critically ill the prokinetic effects of intravenous metoclopramide are maintained.

## References

1. Jooste CA, Mustoe J, Collee G: Metoclopramide improves gastric motility in critically ill patients. *Intensive Care Med.* 1999, 25: 464-468.