

# Nasogastric and nasojejunal feeding did not differ for acute-phase response or pain in severe acute pancreatitis

Eatock FC, Chong P, Menezes N, et al. A randomized study of early nasogastric versus nasojejunal feeding in severe acute pancreatitis. *Am J Gastroenterol.* 2005;100:432-9.

**Clinical impact ratings:** Hospitalists ★★★★★☆ Gastroenterology ★★★★★☆☆

## QUESTION

Is early nasogastric (NG) feeding as effective and safe as nasojejunal (NJ) feeding in patients with severe acute pancreatitis?

## METHODS

**Design:** Randomized controlled trial.

**Allocation:** Unclear allocation concealment.\*

**Blinding:** Unblinded.\*

**Follow-up period:**  $\geq 6$  months†.

**Setting:** Glasgow Royal Infirmary, Scotland.

**Patients:** 50 patients  $\geq 18$  years of age (53% men) admitted with both clinical and biochemical presentation of acute pancreatitis (i.e., abdominal pain and serum amylase levels  $\geq 3$  times the upper limit of the reference range) and objective evidence of disease severity (i.e., Glasgow prognostic score  $\geq 3$ , Acute Physiology and Chronic Health Evaluation [APACHE] II score  $\geq 6$ , or C-reactive protein level  $> 150$  mg/L). Pregnant women were excluded.

**Intervention:** NG feeding ( $n = 27$ , median age 63 y) using size 8FG polyurethane tubes (Flocare, Nutricia Ltd, Trowbridge, UK)

placed by medical or nursing staff or NJ feeding ( $n = 23$ , median age 58 y) using either the same polyurethane tubes (Flocare) passed at endoscopy and clipped into the jejunal mucosa (Endoclip, Keymed, Southend-on-Sea, UK) or size 7FG nasobiliary catheters (Wilson Cook, Winston-Salem, NC, USA) placed in the jejunum at endoscopy. All patients received a low-fat, semielemental feed containing 1 kcal/mL and 40 g/L protein (Pepti 2000 LF, Nutricia Ltd, Trowbridge, UK). Feeds began at full strength at 30 mL/h, increasing to 100 mL/h over 24 to 48 hours. Caloric target was 2000 kcal/d. Feeds provided 75% of energy from carbohydrate, 16% from protein, and 9% from fat.

**Outcomes:** C-reactive protein levels, APACHE II scores, pain (visual analogue scale [VAS] scores), analgesic requirement, need for conversion from enteral to parental feeding, hospital and intensive care unit (ICU) stay, and mortality.

**Patient follow-up:** 98% (intention-to-treat analysis).

## MAIN RESULTS

The NG and NJ feeding groups did not differ for median C-reactive protein levels, APACHE II scores, or pain (VAS scores or analgesic requirement) on any day; conversion to parenteral feeding (0 vs 1); median duration of hospital stay (16 vs 15 d, difference 1, 95% CI  $-12$  to 5); proportion admitted to the ICU (26% vs 36%, difference 10%, CI  $-42$  to 18); or death (19% vs 32%, difference 13%, CI  $-50$  to 14).

## CONCLUSION

In patients with severe acute pancreatitis, nasogastric and nasojejunal feeding did not differ for acute-phase response, pain, duration of hospital stay, or death.

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*For correspondence:* Dr. C.W. Imrie, Glasgow Royal Infirmary, Glasgow, Scotland. ■

\*See Glossary.

†Information provided by author.

## COMMENTARY

Until recently, avoidance of enteral feeding was considered an essential element in the management of patients with acute pancreatitis. Conventional wisdom held that food in the upper gastrointestinal tract would stimulate pancreatic exocrine secretion and exacerbate the disease. Like many dicta in the treatment of patients with acute pancreatitis, however, this assumption has recently been challenged. A handful of small randomized clinical trials have shown that enteral feeding is well-tolerated in acute pancreatitis and may actually attenuate the severity of systemic inflammation and improve clinical outcome (1).

However, as attractive as enteral nutrition for pancreatitis might be, many clinicians believe it necessary to use feeding tubes positioned in the proximal jejunum—either radiologically or endoscopically—because pancreatitis typically induces significant gastric ileus. Eatock and colleagues challenged this assumption, showing that most patients tolerate early enteral feeding and that the gastric route is as effective as the jejunal route. Although the study was underpowered to detect small but potentially important differences between the 2 groups, the absence

of a large difference between groups can have important implications for current practice. Endoscopic or radiologic placement of feeding tubes entails costs and a small but recognized risk, along with the need to transport an unstable patient to a location where the procedure can be performed. Moreover, initiation of feeding may be delayed if resources for the procedure are not readily available. The take-home message of the study by Eatock and colleagues is that it is feasible to feed patients with pancreatitis early in the course of their illness using a nasogastric feeding tube; other nutritional routes can be reserved for patients who are unable to tolerate nasogastric feeding. It is a simple but important message.

*John C. Marshall, MD, FRCSC  
St. Michael's Hospital  
University of Toronto  
Toronto, Ontario, Canada*

## Reference

1. Al-Omran M, Groof A, Wilke D. Enteral versus parenteral nutrition for acute pancreatitis. *Cochrane Database Syst Rev.* 2003;(1):CD002837.