TREATMENT

Review: enteral nutrition reduces infections, need for surgical intervention, and length of hospital stay more than parenteral nutrition in acute pancreatitis


What is the efficacy and safety of enteral nutrition (EN) compared with total parenteral nutrition (PN) for patients with acute pancreatitis (AP)?

METHODS

6 trials (n = 263) met the selection criteria. 4 studies had poor quality (Jadad score ≤2 out of 5). Meta-analysis was completed using a random effects model and intention to treat data from individual studies. Patients who received EN had a lower risk of infection than those who received PN, less need for surgical intervention, fewer septic complications, need for surgical intervention, length of hospital stay, and hospital mortality.

MAIN RESULTS

<table>
<thead>
<tr>
<th>Outcomes at hospital discharge</th>
<th>Number of studies</th>
<th>Weighted event rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EN (%)</td>
<td>PN (%)</td>
</tr>
<tr>
<td>Infections</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Septic complications</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Surgical intervention</td>
<td>4</td>
<td>11%</td>
</tr>
<tr>
<td>Other non-infectious complications</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>Hospital mortality</td>
<td>6</td>
<td>8%</td>
</tr>
</tbody>
</table>

Abbreviations defined in glossary; RRR, NNT, and CI calculated from data in article using a random effects model.

CONCLUSION

Evidence from primarily low quality trials shows that in patients with acute pancreatitis, enteral nutrition reduces infections, septic complications, need for surgical intervention, and length of hospital stay compared with total parenteral nutrition but does not affect non-infectious complications or hospital mortality.

Commentary

The review by Marik et al recommends the use of EN for patients with AP. Based on the poor quality of the included studies, the pooled effect could be an overestimation. However, existing studies with various levels of evidence also provide support for the use of EN for severely ill patients.

Patients with AP are a very specific disease population, and the issues related to providing EN to these patients may differ from those related to more general patient populations. For example, enteral feeding of patients with AP requires that nurses be able to recognise the link between deterioration of AP symptoms and possible dislocation of the feeding tube or symptoms related to an overload of food in the small intestine. Attention to feeding tube positioning, measurement of gastric retention and EN, and feeding pump controlled administration is important for AP patients.

Optimal EN in the intensive care unit often fails because EN gets less attention than other life saving technologies. Studies of feeding intake have shown that optimal feeding rarely is achieved in >50% of patients. Therefore, the positive effects shown in efficacy studies may be diluted by the daily reality of clinical practice. The success of EN feeding will be determined largely by the quality of nursing practice.

For correspondence: Dr P E Marik, Department of Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA, USA. maripe@ccm.upmc.edu

Source of funding: no external funding.

Review: enteral nutrition reduces infections, need for surgical intervention, and length of hospital stay more than parenteral nutrition in acute pancreatitis

*Evid Based Nurs* 2005 8: 19
doi: 10.1136/ebn.8.1.19

Updated information and services can be found at:
[http://ebn.bmj.com/content/8/1/19](http://ebn.bmj.com/content/8/1/19)

These include:

**References**
This article cites 3 articles, 1 of which you can access for free at:
[http://ebn.bmj.com/content/8/1/19#BIBL](http://ebn.bmj.com/content/8/1/19#BIBL)

**Email alerting service**
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Topic Collections**
Articles on similar topics can be found in the following collections
- Pancreas and biliary tract (15)
- Pancreatitis (2)
- Drugs: infectious diseases (241)
- Injury (108)
- Trauma (135)
- Internet (387)
- Pneumonia (infectious disease) (52)
- Pneumonia (respiratory medicine) (44)
- Small intestine (1)
- TB and other respiratory infections (122)

**Notes**

To request permissions go to:
[http://group.bmj.com/group/rights-licensing/permissions](http://group.bmj.com/group/rights-licensing/permissions)

To order reprints go to:
[http://journals.bmj.com/cgi/reprintform](http://journals.bmj.com/cgi/reprintform)

To subscribe to BMJ go to:
[http://group.bmj.com/subscribe/](http://group.bmj.com/subscribe/)