Direct percutaneous endoscopic jejunal insertion using a fine needle for jejunal anchoring

Percutaneous endoscopic gastrojejunos-

Figure 1 Insertion of a 21-gauge needle (the finder needle) into the jejunal lumen at the optimal transillumination. A loop snare (S) is passed endoscopically around the finder needle (N), resulting in attachment of the jejunum to the abdominal wall. This prevents the jejunum from sliding away during the procedure.

Figure 2 The jejunostomy tube (J) in the jejunal lumen. After the jejunum has been anchored with the finder needle, a long needle with a trochar is inserted parallel to the finder needle. A guide wire is passed through the trocar into the jejunum, snared, and pulled out of the mouth with the endoscope. The tapered end of a standard 20-Fr percutaneous endoscopic gastrostomy (PEG) tube is mounted onto the end of the guide wire and pushed through the mouth into the stomach. The guide wire is then gradually withdrawn, pulling the PEG tube (J) out through a small abdominal incision.

Table 1 Indications for direct percutaneous endoscopic jejunalostomy tube placement

<table>
<thead>
<tr>
<th>Patients</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastroesophageal regurgitation</td>
<td>12</td>
<td>57</td>
</tr>
<tr>
<td>Pulmonary aspiration</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Gastroparesis</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Gastric resection</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>

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The method was successful and resulted in proper placement of DPEJ tubes in 17 patients (a success rate of 81%). In four patients, DPEJ tube placement could not be completed due to an inability to achieve adequate transillumination. No significant or major complications were associated with the procedure. Minor complications in two patients included cellulitis and cutaneous leakage of enteral contents. On the basis of this experience, it appears that DPEJ tube placement with this method is a safe and effective means of providing prolonged jejunal nutrition. Similar observations have been reported by other investigators [4,5]. We believe that the application of this modified technique could lead to wider acceptance of DPEJ tube placement in clinical gastroenterology.

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