

How effective is enteral nutrition via naso-gastric tubes in patients with alcoholic liver disease?

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Patients with liver disease have higher nutritional requirements⁽¹⁾, which are often difficult to meet with oral diet alone; thus supplementary nasogastric tube-feeding is required to prevent further decline in their nutritional status. Protein–energy malnutrition occurs in 80–100% of patients with decompensated liver disease⁽²⁾ and is associated with higher rates of complications and mortality. Nutrition support improves clinical outcome in those with alcoholic liver disease (ALD)⁽³⁾ and naso-gastric (NG) tube feeding should be considered to ensure nutritional requirements are met. However, frequent tube dislodgement may prevent effective enteral feeding.

A prospective audit was performed to quantify the scale of this problem. Data were recorded on twenty-one consecutive patients with ALD, over a 10-week period. Information on type/amount of feed prescribed and delivered, number of NG tubes dislodged, reasons for dislodgements, degree of encephalopathy and methods of tube confirmation were recorded.

Fourteen males and seven females, with a mean age of 47 (range 28–61) years received NG feeding for 173 d. Of the 155 810 ml total volume of feed prescribed, only 46% was delivered. This equated to 49% of prescribed protein/kcal.

Reasons for suboptimal delivery of feed	Volume of feed (ml) lost as a consequence
Patient removal or refusal of NG tube	47 174
Vomiting	585
Coughing	800
Staff oversight	5404
Faulty equipment	1660
Unknown break in feeding	6605
Delay	4949
Investigation or procedures	3381
Radiology	9109
Tube blockage	700
Personal needs	4180

Seventy-eight tubes were partially or fully dislodged, with each patient requiring between two and eleven NG tubes (median 6). Sixty-seven of seventy-eight (85.9%) tube dislodgements were due to patient removal; the rate increasing with degree of encephalopathy (tubes per d; 0.36 if grade 0; 0.35 if grade 1; 0.63 if grade 2; 0.8 if grade 3). However, there were only four patients with grade 2/3 encephalopathy. NG tube position was checked by aspirate pH in only five of seventy-eight cases (6.4%) with sixty-three of seventy-eight being confirmed by chest radiograph (80.7%).

In this cohort of patients with ALD enteral nutrition was inadequate due to tube dislodgement. In addition, there was a lack of awareness of current guidelines to confirm NG tube position. This has both clinical and financial implications and highlights the need for methods of tube prevention (e.g. nasal bridle). In addition, further training for NG tube insertion has been initiated.

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