Editorial

Efficacy of enteral tube feeding (ETF) and parenteral nutrition (PN) in patients with gastrointestinal cancer

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This editorial article examines,[1] the efficacy of artificial nutritional support in patients with gastrointestinal cancer in an acute hospital setting, and specifically the relative merits of enteral tube feeding (ETF) and parenteral nutrition (PN) in patients undergoing elective surgical procedures and,[2] efficacy of artificial nutritional support, mainly ETF, in the community.

(1) Acute setting (ETF versus PN) Although it is now generally believed that ETF is preferable to PN, prolonged intestinal ileus following surgery can make ETF difficult. In such circumstances a tube placed post-pylorically either endoscopically or radiologically can allow feeding to occur, although there may be practical difficulties in insertion and maintaining it in the desirable position due to regurgitation / migration of the tube back into the stomach. The relative benefit of ETF and PN in patients with upper GIT cancer were evaluated in a systematic review.[1] Using a fixed effect model and unstandardised effect size indices when appropriate, significant benefits of ETF over PN were found in:

(i) Overall complications in 5 out of 5 RCTs (odds ratio = 0.67 (95% CI 0.51, 0.87) (p=0.003; n=927)

(ii) Infectious complications in 8 out of 12 randomised controlled trials RCTs (2 with identical incidence and 2 with more complications) (n=1098; odds ratio = 0.69 (95% CI, 0.52, 0.91) (p=0.009)

(iii) Length of hospital stay in 7 out of 7 studies (weighted mean difference -1.8 (95% CI -2.62, -0.99) days (p<0.001; n=929)

(iv) Post-operative sepsis score in 2 out of 2 studies -2.21 (95% CI-2.92, -1.49) (p<0.0001) (n=430).

It is not clear if these differences are due to benefits associated with ETF or detrimental effects of PN.

(2) Community setting The long-term use of ETF and PN at home in patients with cancer has been controversial, and their use varies from region to region and from country to country[2-4] and over time. There are no RCTs to address this controversy, possibly because of the ethical difficulties in undertaking such studies. However, the following information (1996-2004) based on the British Artificial Nutrition Survey (BANS), the largest ongoing survey of its kind in the world, can provide some insights into the indications, efficacy and outcome of home ETF (HETF).

(i) Prevalence: the prevalence of home artificial nutrition has been rapidly increasing, and even more rapidly in patients with GIT cancers. Of 71,645 registered patients (1996-2004) 22% had malignant conditions, two thirds of whom had GIT cancer (mainly oropharyngeal and oesophageal cancer).

(ii) Outcome of HETF: only about a quarter of patients with GIT cancer were continuing HETF at 1 year, with the majority dying, mostly from the underlying disease (almost 88%), but some from incidental causes (12%). At 3 months, 14% had returned to oral feeding and 19% died whilst on HETF. There patients spent virtually all their time outside hospital, which has financial implications.

(iii) Reason for HETF (n=10,528): The primary reasons for tube feeding were swallowing problems (59.3%), GIT obstruction (13.4%) and the need

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to improve nutritional status (18.5%).

(iv) Ability to manage (at start) (n=10,354): only 55% of patients with GIT cancer were independent, the remaining requiring some help (33%) or total help (12%). The ability to manage decreased with age, with 71% of those aged <50 years being independent compared to only 27%>75 years (42% of this age group required some help and 31% total help).

(v) Activity level (at start): only 46% of patients with GIT cancer had full normal acitivty, with the remaining having limited activity (43%) or very limited activity (8% being house bound and 3% bed-bound). Again older individuals were worse affected, since among those >75 years, 16% were house bound and 8% bed-bound (c.f. 4% and 1% in those <50 years).

The disabilities generally deteriorate with time, and many patients with GIT cancer have impaired quality of life due to psychosocial distress.[5] Despite this, HETF has been increasingly used in older individuals with greater disabilities. The benefits need to be balanced against the priorities and competing demands within health care systems.

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