Daily oral supplementation during and after a hospital stay improved nutritional status in elderly patients, but did not affect weight change

Gazzotti C, Arnaud-Battandier F, Parello M, *et al.* Prevention of malnutrition in older people during and after hospitalisation: results from a randomised controlled clinical trial. *Age Ageing* 2003;**32**:321–5.

Q Does daily oral supplementation given in hospital and after discharge prevent weight loss in elderly patients?

METHODS

Design: randomised controlled trial.

Allocation: {concealed}*.

Blinding: unblinded.

Follow up period: 60 days.

Setting: the geriatric ward of a hospital in Liège, Belgium.

Patients: 80 patients ≥ 75 years of age (mean age 80 y, 76% women) who were at risk of malnutrition (total Mini Nutritional Assessment [MNA] score between 17 and 23.5). Exclusion criteria: medical conditions preventing oral feeding, patients at end of life, severe dementia (Mini Mental Score < 10), clinical signs of dehydration or heart failure, and diseases requiring special dietary treatment (kidney or liver failure).

Interventions: daily oral supplementation that comprised 1 Clinutren soup (1 kcal/ml) and 1 Clinutren 1.5 (1.5 kcal/ml) (Nestlé Clinical Nutrition, Brussels, Belgium), which provided 500 kcal and 21 g of protein per day in a 200 ml cup ($n = 39$); or no oral supplementation ($n = 41$) for 60 days.

Outcomes: body weight and nutritional status (assessed using the MNA).

Patient follow up: 86%.

*Information provided by author.

MAIN RESULTS

Analysis was by intention to treat. The oral supplementation and control groups did not differ significantly for percent change in body

weight from baseline to 60 days (increase of 0.68% *v* decrease of 1.73%, $p = 0.05$, borderline significance). Patients who received oral supplementation had better nutritional status as assessed by total MNA scores (23.5 *v* 20.8, $p = 0.004$).

CONCLUSION

Daily oral supplementation given in hospital and after discharge to elderly patients improved nutritional status at 60 days more than no supplementation, but did not significantly affect percent change in weight from baseline.

Commentary

Malnutrition in elderly people may present as substantial loss of body weight or failure to thrive (FTT). It is often an indicator of frailty, and malnourished older patients are at particular risk of adverse outcomes, such as frequent falls, incontinence, or confusion.¹ One feature of older patients with FTT is the frequency with which these patients are discharged from hospital to higher levels of care.²

High calorie sip supplements, such as those used in the trial by Gazzotti *et al.*, can be expensive. Therefore, it is essential that older patients be screened to identify those with or at risk of malnutrition. Initial education and information to identify high calorie foods that are accessible should also be provided to patients and their families or caregivers.

After identification of malnutrition in elderly patients, it is also important to determine the cause of weight loss because some are reversible (eg, infection, gastrointestinal disease, and depression). In addition, nursing assessment is needed to identify functional and social problems that may be contributing to weight loss (eg, immobility, sensory deprivation, dental problems, poverty, caregiver fatigue, and neglect).

The study by Gazzotti *et al.* showed that daily oral supplementation during and after a hospital stay can improve nutritional status in elderly people. It would have been interesting if the trial had assessed other outcomes, such as frequency of falls or discharge destination. The study also showed that health professionals trained in the use of MNA can easily screen for malnutrition in elderly people. However, before initiating supplementation, it is most important to determine the cause of weight loss by considering the syndrome of frailty as a premise for further investigation.

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1 Winograd CH, Gerety MB, Chung M, *et al.* Screening for frailty: criteria and predictors of outcomes. *J Am Geriatr Soc* 1991;**39**:778–84.

2 Hildebrand JK, Joos SK, Lee MA. Use of the diagnosis "failure to thrive" in older veterans. *J Am Geriatr Soc* 1997;**45**:1113–7.

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