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FRESENIUS KABI  
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Introduction

Welcome to Fresenius Kabi’s Quarterly Abstract Bulletin for enteral nutrition. We have reviewed the following journals over the past three months, and selected any nutrition support related articles:

- Age and Ageing
- American Journal of Clinical Nutrition
- Archives of Diseases in Childhood
- BMJ
- British Journal of Community Nursing
- British Journal of Nursing
- Clinical Nutrition
- Complete Nutrition
- Critical Care Medicine
- Current Opinion in Clinical Nutrition and Metabolic Care
- Dysphagia
- European Journal of Clinical Nutrition
- Gastrointestinal Nursing
- GUT
- International Journal of Palliative Nursing
- Intensive Care Medicine
- Intensive and Critical Care Nursing
- Journal of Community Nursing
- Journal of Human Nutrition and Dietetics
- Journal of Parenteral and Enteral Nutrition
- Journal of the American Geriatric Society
- Journal of Woundcare
- Lancet
- Nutrition
- Nutrition in Clinical Practice
- Nursing in Practice
- Nursing and Residential Care
- Nursing Older People
- Nursing Standard
- Nursing Times
- Paediatric Nursing

We do recommend that the original article is used for the full details and results.

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This publication and previous editions are also available online at www.fresenius-kabi.co.uk under the nutrition service section.
Nutrition therapy in the critical care setting: What is “best achievable” practice? An international multicenter observational study

N Cahill, R Dhaliwal, A Day, X Jiang and D K Heyland


Abstract

Objective: To describe current nutrition practices in intensive care units and determine “best achievable” practice relative to evidence-based Critical Care Nutrition Clinical Practice Guidelines. Design: An international, prospective, observational, cohort study conducted January to June 2007. Setting: One hundred fifty-eight adult intensive care units from 20 countries. Patients: Two-thousand nine-hundred forty-six consecutively enrolled mechanically ventilated adult patients (mean, 18.6 per site) who stayed in the intensive care unit for at least 72 hrs. Interventions: Data on nutrition practices were collected from intensive care unit admission to intensive care unit discharge or a maximum of 12 days. Measurements and Main Results: Relative to recommendations of the Clinical Practice Guidelines, we report average, best, and worst site performance on key nutrition practices. Adherence to Clinical Practice Guideline recommendations was high for some recommendations: use of enteral nutrition in preference to parenteral nutrition, glycemic control, lack of utilization of arginine-enriched enteral formulas, delivery of hypocaloric parenteral nutrition, and the presence of a feeding protocol. However, significant practice gaps were identified for other recommendations. Average time to start of enteral nutrition was 46.5 hrs (site average range, 8.2-149.1 hrs). The average use of motility agents and small bowel feeding in patients who had high gastric residual volumes was 58.7% (site average range, 0%-100%) and 14.7% (site average range, 0%-100%), respectively. There was poor adherence to recommendations for the use of enteral formulas enriched with fish oils, glutamine supplementation, timing of supplemental parenteral nutrition, and avoidance of soybean oil-based parenteral lipids. Average nutritional adequacy was 59% (site average range, 20.5%-94.4%) for energy and 60.3% (site average range, 18.6%-152.5%) for protein. Conclusions: Despite high adherence to some recommendations, large gaps exist between many recommendations and actual practice in intensive care units, and consequently nutrition therapy is suboptimal. We have identified “best achievable” practice that can serve as targets for future quality improvement initiatives.

Before-after study of a standardized ICU protocol for early enteral feeding in patients turned in the prone position

J Reignier, J Dimet, L Martin-Lefevre, F Bontemps, M Fiancette, E Clementi, C Lebert and B Renard


Abstract

Backgrounds & aims: To evaluate an intervention for improving the delivery of early enteral nutrition (EN) in patients receiving mechanical ventilation with prone positioning (PP). Methods: Eligible patients receiving EN and mechanical ventilation in PP were included within 48 h after intubation in a before-after study. Patients were semi-recumbent when supine. Intolerance to EN was defined as residual gastric volume greater than 250 ml/6 h or vomiting. In the before group (n=34), the EN rate was increased by 500 ml every 24 h to 2000 ml/24 h; patients were flat when prone and received erythromycin (250 mg IV/6 h) to treat intolerance. In the intervention group (n=38), the EN rate was increased by 25 ml/h every 6 h to 85 ml/h, 25° head elevation was used in PP, and prophylactic erythromycin was started at the first turn. Results: Compared to the before group, larger feeding volumes were delivered in the intervention group (median volume per day with PP, 774 ml [IQR 513-925] vs. 1170 ml [IQR 736-1417]; P< 0.001) without increases in residual gastric volume, vomiting, or ventilator-associated pneumonia. Conclusion: An intervention including PP with 25° elevation, an increased acceleration to target rate of EN, and erythromycin improved EN delivery.
Nutrition and clinical outcome in intensive care patients

R Thibault and C Pichard

Abstract

Purpose of review: In the setting of ICU, the characteristics of patients have changed during the last decade. Patients are older, frequently overweight or obese, present with more chronic diseases and undernutrition. These conditions are characterized by reduced muscle mass and vulnerable homeostasis. This review sustains the hypothesis that an early and optimal nutritional support, combining enteral and parenteral nutrition, could improve the clinical outcome of ICU patients. Recent findings: The combination of stress and undernutrition observed in the ICUs is associated with negative energy balance, which leads to lean body mass loss. Catabolism of lean body mass has been repeatedly associated with a worsening of the clinical outcome, increased length of hospital stay, recovery and healthcare costs. Early enteral nutrition is the recommended feeding route in ICU patients, but it is often unable to fully cover the nutritional needs. Parenteral nutrition is recommended if enteral nutrition is not feasible. Summary: It is hypothesized that supplemental parenteral nutrition, together with insufficient enteral nutrition, could optimize the nutritional therapy by preventing the onset of early energy deficiency, and thus, could allow to reduce the side-effects of undernutrition and promote better chances of recovery after the ICU stay.

Metabolic support of the obese intensive care unit patient: A current perspective

A M Port and C Apovian

Abstract

Purpose of review: Obesity is a widespread condition associated with a variety of mechanical, metabolic, and physiologic changes that affect both health outcomes and delivery of care. Nutrition support is a key element of management during critical illness known to improve outcomes favorably, but is likewise complicated in the presence of obesity. This review serves to discuss the challenges unique to management of critically ill obese patients and an evidence-based approach to nutrition support in this patient population. Recent findings: High-protein, hypocaloric feeding has emerged as a nutrition support strategy capable of reducing hyperglycemia and protein catabolism, while promoting favorable changes in body composition and fluid mobilization. Recent data have shown a protective effect of mild-moderate obesity (BMI 30-39.9 kg/m2), with improved morbidity and mortality outcomes in this subgroup. Therefore, it is unclear whether hypocaloric feeding represents an inferior approach in this subgroup in which weight maintenance may be preferable. Summary: There are many obstacles that limit provision of nutrition support in the obese ICU patient. Calculating energy needs accurately is extremely problematic due to a lack of reliable prediction equations and a wide variability in body composition among the obese patients. Further research is needed to determine a better approach to estimating energy needs in this population, in addition to validating hypocaloric feeding as the standard approach to nutrition support in the obese patients.
Critical illness, gastrointestinal complications, and medication therapy during enteral feeding in critically ill adult patients

I F Btaiche, L-N Chan, M Pleva and M D Kraft

Abstract
Critically ill patients who are subjected to high stress or with severe injury can rapidly break down their body protein and energy stores. Unless adequate nutrition is provided, malnutrition and protein wasting may occur, which can negatively affect patient outcome. Enteral nutrition (EN) is the mainstay of nutrition support therapy in patients with a functional gastrointestinal (GI) tract who cannot take adequate oral nutrition. EN in critically ill patients provides the benefits of maintaining gut functionality, integrity, and immunity as well as decreasing infectious complications. However, the ability to provide timely and adequate EN to critically ill patients is often hindered by GI motility disorders and complications associated with EN. This paper reviews the GI complications and intolerances associated with EN in critically ill patients and provides recommendations for their prevention and treatment. It also addresses the role of commonly used medications in the intensive care unit and their impact on GI motility and EN delivery.

Role of enteral nutrition and pharmaconutrients in conditions of splanchnic hypoperfusion

J E de Aguilar-Nascimento, D Borges Dock-Nascimento and R Bragagnolo

Abstract
In critically ill patients there is consistent evidence that significant benefits are achieved if nutrients are delivered within the gut compared with the parenteral route. However, in conditions related to gut hypoflux, enteral nutrition may play a double role in counterbalancing the installed low-flow state. On the one hand, enteral-induced postprandial hyperemia may preserve the mucosal barrier and ameliorate immune competence; on the other hand, feeding by the gut may pose a theoretical risk of intestinal ischemia. Despite limited investigation, a strategic temporary minimal enteral nutrition with hypocaloric content has been recommended recently aiming to avoid the overfeeding syndrome and the menace of gut hypoperfusion. Under these conditions, the early luminal delivery of key nutrients such as arginine, glutamine dipeptides, antioxidants, and butyrate are an attractive option for this subset of patients. Arginine may prevent intestinal injury due to hypoperfusion but may harm the gut if ischemia is established. In contrast, glutamine may promote benefits in both conditions. Further investigations by randomized trials in this field are necessary.
Nasal bridling decreases feeding tube dislodgment and may increase caloric intake in the surgical intensive care unit: A randomized, controlled trial

C W Seder, W Stockdale, L Hale and R J Janczyk

Critical Care Medicine (2010) 38(3): 797-801

Abstract

Objective: To determine whether nasal bridling is a low-morbidity practice that decreases feeding tube dislodgment and results in improved caloric intake.


Measurements and Main Results: Between January 1, 2008 and July 31, 2008, 80 patients were randomized to have their nasojejunal feeding tubes secured with either a nasal bridle or an adhesive device. Baseline characteristics examined included age, sex, concurrent nasogastric tube presence, primary diagnosis, Acute Physiology and Chronic Health Evaluation III score, need for mechanical ventilation, need for emergent surgery, Riker Sedation Score, and Glasgow Coma Scale. Patients were monitored daily for prevalence and cause of feeding tube removal, percentage of goal calories received, nasal ulceration, and sinusitis. Serum albumin and prealbumin levels were collected weekly. All patients were examined, using an intention-to-treat design. Except for a higher prevalence of emergent surgery in the bridled patients, the bridled and unbridled groups had no difference in baseline characteristics. Bridled tubes were less likely to be unintentionally dislodged than unbridled tubes (18% vs. 63%, p < .0001) resulting in bridled patients receiving a higher percentage of goal calories (median 78% [interquartile range, 65%-86%] vs. 62% [interquartile range, 47%-80%], p = .016) than unbridled patients. There were five cases of mild epistaxis upon bridle insertion and four cases of superficial nasal ulceration associated with the bridle. No bridled patients were diagnosed with sinusitis during the study period. Serum albumin and prealbumin levels did not differ between the groups. Conclusions: Bridling of nasoenteric feeding tubes in critically ill patients is a low-morbidity practice that reduces the rate of unintentional tube dislodgment and may result in improved caloric intake.

Current and future therapeutic prokinetic therapy to improve enteral feed intolerance in the ICU patient

R J L Fraser and L Bryant


Abstract

Malnutrition is associated with poor outcomes in critically ill patients, and providing enteral feeding to those who cannot eat is considered best practice. Enteral feeding is often unsuccessful when there is delayed gastric emptying. Recent research has given additional insight into the mechanisms underlying delayed gastric emptying. Pharmacological strategies to improve the success of feeding include prokinetic drugs such as metoclopramide and erythromycin alone or in combination. When drug treatment fails, either parenteral nutrition or direct small intestinal feeding is indicated. Simpler methods to access the duodenum and distal small bowel for feed delivery are under investigation. This review summarizes current understanding of the mechanisms underlying enteral feeding intolerance in critical illness, together with the evidence for current treatment practices. Areas requiring further research are also described.
Challenges to optimal enteral nutrition in a multidisciplinary pediatric intensive care unit

N M Mehta, D McAleer, S Hamilton, E Naples, K Leavitt, P Mitchell and C Duggan


Abstract

Objective: To describe nutrient intake in critically ill children, identify risk factors associated with avoidable interruptions to enteral nutrition (EN), and highlight opportunities to improve enteral nutrient delivery in a busy tertiary pediatric intensive care unit (PICU). Design, Setting, and Measurements: Daily nutrient intake and factors responsible for avoidable interruptions to EN were recorded in patients admitted to a 29-bed medical and surgical PICU over 4 weeks. Clinical characteristics, time to reach caloric goal, and parenteral nutrition (PN) use were compared between patients with and without avoidable interruptions to EN. Results: Daily record of nutrient intake was obtained in 117 consecutive patients (median age, 7 years). Eighty (68%) patients received EN (20% postpyloric) for a total of 381 EN days (median, 2 days). Median time to EN initiation was less than 1 day. However, EN was subsequently interrupted in 24 (30%) patients at an average of 3.7 ± 3.1 times per patient (range, 1-13), for a total of 88 episodes accounting for 1,483 hours of EN deprivation in this cohort. Of the 88 episodes of EN interruption, 51 (58%) were deemed as avoidable. Mechanically ventilated subjects were at the highest risk of EN interruptions. Avoidable EN interruption was associated with increased reliance on PN and impaired ability to reach caloric goal. Conclusions: EN interruption is common and frequently avoidable in critically ill children. Knowledge of existing barriers to EN such as those identified in this study will allow appropriate interventions to optimize nutrition provision in the PICU.

Nutritional management after Roux-en-Y gastric bypass

L Carlos do Rego Furtado


Abstract

Changes in the anatomy and function of the gastrointestinal tract after bariatric surgery markedly change patients’ eating patterns. Malnutrition is a significant risk associated with all bariatric procedures, which can lead to dangerous nutritional deficiencies. However, if correct patient selection is conducted and if patients receive thorough preoperative nutrition education and postoperative nutritional follow-up, these deficiencies are largely preventable. Nurses are important members of the multidisciplinary team; assisting in patient selection, providing hands-on care, and educating the patient on the surgical process and post-operative dietary restrictions. It is critical for nurses to understand immediate and projected nutritional consequences of surgery, in order to monitor the patient for diet tolerance and nutrient deficiency symptoms, to encourage dietary compliance, and to reinforce the long-term dietary restrictions. With appropriate supplementation and patient compliance, all nutritional deficiencies can be avoided or corrected.
Clinical outcomes comparing parenteral and nasogastric tube nutrition after laryngeal and pharyngeal cancer surgery

J Ryu, B-H Nam and Y-S Jung

Abstract
Nasogastric tube-assisted enteral feeding and parenteral feeding are utilized for nutritional support after major surgery. Although these nutritional supports have been compared before, there have been no comparative trials following surgery for laryngeal and pharyngeal cancer. In this study, 81 patients were randomized to total parenteral nutrition (TPN) or nasogastric tube nutrition (NGTN) after laryngopharyngeal cancer surgery. The two groups were well-matched demographically and clinically. Clinical outcomes such as time of commencement of oral feeding and hospital stay and complications such as fistula were similar in both groups. One case in the TPN group had catheter-related sepsis, whereas aspiration pneumonia occurred in four cases (9.8%) in the NGTN group. The daily cost of NGTN was $11.81 cheaper than that of TPN. Subjective symptoms of nasal and pharyngeal discomfort and scores on subjective swallowing were more severe in the NGTN group within the first postoperative week but became similar thereafter. Although there was no difference in objective postoperative outcomes between both groups, these results imply that each method had particular advantages and disadvantages. Nutritional support after laryngopharyngeal cancer surgery should be determined after full consideration of each patient’s conditions and surgical details along with economics.

Enteral tube feeding—From hospital to home

C Best and H Hitchings

Abstract
There are a number of benefits to providing home enteral feeding, however, problems can occur if care is not taken to arrange training and after-care appropriately. It is therefore essential to facilitate an informed and thorough transfer of care to minimize potential problems. This article will address some of the issues that arise when patients who require home enteral feeding are discharged from hospital to their own homes or to care homes. These issues include the knowledge that is required to enable the patient and/or carer to safely manage their feeding tube, the feeding regimen, the continuing support required from healthcare professionals, and some of the more common problems that may arise.
Home enteral nutrition NICE guidelines and nutrition support in primary care

O Ojo

Abstract
The Home Enteral Nutrition team provides support to patients who are being fed via enteral feeding tube in the community. The use of the recently developed policy in combination with the National Institute for Clinical Excellence (NICE) guideline on nutrition support will change the way care is provided to patients and enhance service delivery. However, there are difficulties in the implementation of policies and guidelines which often militate against the delivery of high standard of care. This paper was an attempt to apply the Kotter's eight-step change management model in the implementation of the HEN team policy and NICE guideline on nutrition support through training of district nurses, liaison with colleagues and carrying out a clinical audit. The clinical audit was aimed at institutionalizing the new approach for the delivery of quality care. The Kotter's model recognized the urgency needed and it enabled the building of coalitions that is essential in meeting the desired standard in today's NHS.

Evidence that protein requirements have been significantly underestimated

R Elango, M A Humayun, R O Ball and P B Pencharz

Abstract
Purpose of review: This review discusses recent evidence that suggests a significant underestimation of protein requirements in adult humans. Recent findings: Traditionally, total protein requirements for humans have been determined using nitrogen balance. The recent Dietary Reference Intake recommendations for mean and population-safe intakes of 0.66 and 0.8 g/kg/day, respectively, of high-quality protein in adult humans are based on a meta-analysis of nitrogen balance studies using single linear regression analysis. We reanalyzed existing nitrogen balance studies using two-phase linear regression analysis and obtained mean and safe protein requirements of 0.91 and 0.99 g/kg/day, respectively. The two-phase linear regression analysis is considered more appropriate for biological analysis of dose-response curves. Considering the inherent problems associated with the nitrogen balance method, we developed an alternative method, the indicator amino acid oxidation technique, to determine protein requirements. The mean and population-safe requirements in adult men were determined to be 0.93 and 1.2 g/kg/day and are 41 and 50%, respectively, higher than the current Dietary Reference Intakes recommendations. Summary: The indicator amino acid oxidation-based requirement values of 0.93 and 1.2 g protein/kg/day and the reanalysis of existing nitrogen balance studies are significantly higher than current recommendations. Therefore, there is an urgent need to reassess recommendations for protein intake in adult humans.
Influence of an eicosapentaenoic and docosahexaenoic acid-enriched enteral nutrition formula on plasma fatty acid composition and biomarkers of insulin resistance in the elderly

J Olza, M D Mesa, C M Aguilera, R Moreno-Torres, A Jime´nez, A P de la Cruz and A Gil


Abstract

Background & aims: n-3 Polyunsaturated fatty acids may improve cardiovascular outcomes in elderly. The aim of this study was to determine the effect of feeding elderly patients exclusively with an n-3 polyunsaturated fatty acid-enriched diet specifically designed for enteral nutrition for 6 months, evaluating modifications in plasma fatty acid profile and some biomarkers of insulin resistance (IR).

Methods: Thirty-two patients >65 years were fed a new enteral formula (T-Diet Plus®) containing 75 mg/l of eicosapentaenoic acid (EPA) and 35 mg/l of docosahexaenoic acid (DHA) and 33 were fed an enteral diet intended for elderly (Jevity®). Blood samples were drawn at the beginning and after 3 and 6 months of feeding. Plasma lipids, total plasma and lipid fraction fatty acid profiles, and some IR-associated adipokines were analysed.

Results: Feeding on T-Diet Plus® allowed EPA and DHA incorporation into plasma lipids and normalised blood triacylglycerols (TAG) levels after 3 months without major changes in IR, leptin and adiponectin.

Conclusions: Feeding the elderly exclusively with an enteral formula enriched with EPA and DHA improves their plasma lipid fatty acid profile and lowers TAG, a well known cardiovascular risk biomarker, without affecting IR.

Safety of probiotics in patients receiving nutritional support: A systematic review of case reports, randomized controlled trials, and nonrandomized trials 1-3

K Whelan and C E Myers


Abstract

Background: Probiotics are increasingly used in patients receiving nutritional support; however, some case reports and trials have questioned their safety in such patients. Objective: The objective was to investigate the safety of probiotics in patients receiving nutritional support through a systematic review of case reports, randomized controlled trials (RCTs), and nonrandomized trials. Design: The systematic review followed Cochrane and PRISMA (Preferred Reporting Items for Systematic Reviews and Meta- Analyses) recommendations. Six electronic databases were searched, a hand search of conference proceedings and reference lists was performed, and experts were contacted. Case reports, RCTs, and nonrandomized trials of probiotic use in patients also receiving enteral or parenteral nutrition were included in the review. Two reviewers independently screened the relevant articles and extracted the data. Results: In total, 1966 articles were identified, of which 72 fulfilled the inclusion criteria. There were 20 case reports of adverse events in 32 patients, all of which were infections due to Lactobacillus rhamnosus GG or Saccharomyces boulardii; the risk factors included central venous catheters and disorders associated with increased bacterial translocation. There were 52 articles reporting 53 trials in which 4131 patients received probiotics. Most trials showed either no effect or a positive effect on outcomes related to safety (eg, mortality and infections). Only 3 trials showed increased complications, which were largely noninfectious in nature and in specific patient groups (eg, transplant and pancreatitis). In 2 of these trials, the probiotic was administered through a postpyloric tube. Conclusion: Many probiotics have been used safely in patients receiving nutritional support, although some probiotic products (strains or combinations) have been shown to increase the risk of complications in specific patient groups.
Efficacy and tolerance of gastrostomy feeding in Duchenne muscular dystrophy

L Martigne, D Seguy, N Pellegrini, D Orlikowski, J-M Cuisset, A Carpentier, V Tiffreau, D Guimber and F Gottrand

Abstract
Undernutrition occurs often in individuals with Duchenne muscular dystrophy (DMD). Between 1997 and 2007, a gastrostomy was placed in 25 patients with DMD (median: 23 years old; range, 11–38 years) for weight loss (n=22) and/or swallowing disorders (n=13). We evaluated nutritional status using the weight-for-age (W/A) ratio, comparing the values to the reference curve for DMD patients. During the first 9 months, nutritional status improved: the W/A ratio increased and reached a plateau. The W/A ratio was 69% (range, 45–128%) at the start and increased to 87% (range, 49–164%) at the maximal follow-up of 22 months (P < 0.001). However, the W/A ratio did not reach the median value for age. Complications occurred in 21 patients (84%), but caused no mortality. Our data suggest that gastrostomy is well tolerated by, and effective for improving the nutritional status of, individuals with DMD.

Older adults and patients in need of nutritional support: Review of current treatment options and factors influencing nutritional intake

W F Nieuwenhuizen, H Weenen, P Rigby and M M Hetherington

Abstract
Background & aims: Many older adults and patients do not achieve sufficient nutritional intake to support their minimal needs and are at risk of, or are suffering from, (protein-energy) malnutrition. Better understanding of current treatment options and factors determining nutritional intake, may help design new strategies to solve this multifactorial problem. Methods: Medline, Science Citation Index, ScienceDirect and Google databases (until December 2008) were searched with the keywords malnutrition, elderly, older adults, food intake, energy density, variety, taste, satiety, and appetite. Results: 37 Factors affecting nutritional intake were identified and divided in three categories; those related to the environment, the person, and the food. For older adults in nursing homes, encouragement by carers and an appropriate ambiance seem particularly important. Meal fortification, offering variety, providing frequent small meals, snacks and particularly Oral Nutritional Supplements (ONS) between meals are other possibilities for this group. Product factors that stimulate intake include palatability, high energy density, low volume, and liquid format. Conclusion: The current review gives a comprehensive overview of factors affecting nutritional intake and may help carers to improve nutritional intake in their patients. The product factors identified here suggest that especially small volume, energy and nutrient dense ONS can be effective to improve nutritional intake.
Early serum IGF-I response to oral protein supplements in elderly women with a recent hip fracture

T Chevalley, P Hoffmeyer, J-P Bonjour and R Rizzoli

Abstract
Background & aims: In patients with recent hip fracture, reduced serum IGF-I in relation to protein undernutrition is frequent. Elevation of circulating IGF-I in response to a daily oral supplement of 20 g of casein was observed after 6 months. This study determined if the response to casein as compared to whey protein can be observed as early as after one week. Methods: 45 Women were randomized after recent hip fracture into 3 groups receiving a preparation of 20 g of casein, an isocaloric supplement of 20 g of whey protein or an isocaloric supplement of 15 g of whey protein combined with 5 g of essential amino acids (a.a.). Results: A similar significant elevation of serum IGF-I was already observed after 7 days for casein (+37.3 mg/L), whey (+29.4) and for whey + a.a. (+34.3). From day 7-28, no further significant rise in IGF-I was recorded. Conclusion: After one week of protein supplementation, the percent increase of IGF-I was of similar magnitude to that previously observed after 6 months of protein supplementation. It suggests that in hip fracture patients, long-term effects of various protein preparations on IGF-I could be predicted from changes observed as early as 7 days after the onset of supplementation.

Should oral nutritional supplementation be given to undernourished older people upon hospital discharge?
A controlled trial

M E T McMurdo, RJG Price, M Shields, J Potter and DJ Stott

Abstract
Objectives: To determine whether the oral nutritional supplementation of undernourished older people upon discharge from hospital improves muscle function and reduces disability. Design: Randomized controlled trial. Setting: Community-based study in two centers in Scotland. Participants: Two hundred fifty-three people. Intervention: Randomization to oral nutritional supplementation (600 kcal/d) or control supplement of 200 kcal/d. Measurements: Primary outcome (20-point activity of daily living Barthel Index) and secondary outcomes (handgrip strength, Sit-to-Stand test, and Euroquol) were measured at baseline (after discharge from the hospital and before supplement was commenced) and 8 and 16 weeks and accelerometry-measured physical activity levels at baseline and 16 weeks. Falls were recorded prospectively. Results: Mean age was 82. There was no significant difference in change in Barthel score between supplement and control groups (adjusted mean difference=0.28, 95% confidence interval (CI)= -0.28-0.84). Handgrip strength improved more in the supplemented group (adjusted mean difference=1.52 kg, 95% CI=0.50-2.55; P=.004). The supplemented group exhibited modestly greater vector movement (overall activity) than controls (P=.02). There were no significant between-group differences in Sit-to-Stand test, health-related quality of life, or falls. Adherence was 38.2% in the nutritional supplement group and 50.0% in the control supplement group. Weight did not increase in the nutritional supplement group as a whole, but on-treatment analysis adjusting for adherence showed a mean weight gain of 1.17 kg (95% CI=0.07-2.27; P=.04) more than in controls. Conclusion: Oral nutritional supplementation of undernourished older people upon hospital discharge did not reduce disability, despite improving handgrip strength and modestly increasing objectively measured physical activity levels. Lack of an effect of the nutritional supplement used in this study may have been due to low adherence, suggesting that different approaches to nutritional supplementation need to be tested in this population.
Knowledge and attitudes of surgical trainees towards nutritional support: Food for thought

S Awad, P J J Herrod, E Forbes and D N Lobo

Abstract

Background & aims: Up to 40% of patients admitted to UK hospitals are malnourished and appropriate nutritional intervention can improve outcomes. We investigated the knowledge and attitudes of UK surgical trainees towards nutritional support and compared their responses with dieticians. Methods: Trainee surgeons and qualified dieticians were asked to complete a multiple choice question test derived from topics relating to nutritional support, followed by a questionnaire on their attitudes towards nutrition. Participants were unaware that they would be tested. Results: The test was administered to 63 doctors and 25 dieticians. There were 19 newly qualified doctors (foundation year 1 [FY1]), 21 junior surgeons (speciality-training years 1 and 2 [ST1-2]) and 23 senior surgeons (speciality-training years 3 and above [ST3+]). Mean [SE] test scores were lower for doctors compared to dieticians (14.0 [0.64] versus 26.4 [0.22], p < 0.001). The respective test scores for FY1, ST1-2, ST3+ doctors were 9.8 [0.78], 14.3 [1.10] and 17.3 [0.76]. Only 47% of doctors felt they had adequate knowledge of this subject and 65% stated that they regularly made decisions on nutritional support. Furthermore, only 25% stated they could calculate daily energy and nutritional requirements. Conclusion: Despite making decisions related to nutritional support regularly, surgical doctors in the UK demonstrated less knowledge of the fundamental principles of nutritional support than dieticians.
Reference List

  This paper reports on an audit undertaken on this type of system in the placement of nasogastric and post-pyloric feeding tubes.

  This special report details the new ASPEN nutrition support practice recommendations.

  This article discusses the challenges of enteral feeding in critically ill patients.

  This paper discusses strategic recommendations for the establishment, function, and management of a Nutrition Support Team in a variety of different “team” models and health care settings.

  This article considers current tube feeding techniques in adults, focusing on the tubes most commonly found in the community.

  This article discusses the enteral nutrition formulations in the critically ill.

  This article discusses dementia and nutrition.

  Oral feeding toward the end of life may be fraught with dilemmas for health professionals dealing with patients who cannot clearly give their views. The author of this article outlines how a recent report can help with making best decisions.
Notes