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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
- European Journal of Clinical Nutrition
- Gastrointestinal Nursing
- GUT
- 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 Woundcare
- Lancet
- Nutrition
- Nutrition in Clinical Practice
- Nursing and Residential Care
- Nursing Older People
- Nurse Prescribing
- Nursing Standard
- Nursing Times
- Paediatric Nursing

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

Please note that due to copyright law our ability to copy and distribute clinical papers is restricted.

This publication and previous editions are also available online at www.fresenius-kabi.co.uk under the nutrition service section.
Hard to swallow: Dysphagia in Parkinson’s Disease

N Miller, E Noble, D Jones and D Burn

Abstract
Background: swallowing changes occur from the earliest stages of Parkinson’s disease (PD), even in cases asymptomatic for dysphagia. Little empirical evidence exists concerning the individual’s own perception of changes, the impact these have on their life and coping strategies to deal with them. Objective: to establish if and how changes in swallowing impact on the lives of people with PD. Design: in-depth interviews with qualitative analysis of content. Setting: community. Subjects: a total of 23 men and 14 women and their carers. Methods: participants were purposively sampled to give a mix of men, women, family circumstances, stage and duration of PD and severity of swallowing symptoms. Individuals were interviewed at home. Interviews were transcribed. Emergent themes were identified and fed back to participants for confirmation and clarification. Results: two broad themes emerged: (i) effects on swallowing of underlying physical changes, with subthemes of oral-pharyngeal-laryngeal changes, manual changes, effects of fatigue and (ii) psychosocial impact, with subthemes of alterations to eating habits, feelings of stigma, need for social adjustment and carers’ issues. Coping strategies could aid swallowing problems but often to the detriment of others in the family through altered demands on preparation and organisation. Presence of significant impact was not necessarily associated with abnormal range scores on objective swallowing assessments. Conclusions: the psychosocial consequences of the physical changes concerned people most. The importance of the early detection of changes for health and quality of life is underlined.

Reinstituting Oral Feeding in Tube-Fed Adult Patients With Dysphagia

M A Crary and M E Groher

Abstract
Feeding tubes are valuable assets in the rehabilitation of adult patients with dysphagia. Feeding tubes may be placed in response to perceived risks of airway compromise or insufficient nutrient intake. However, not all patients require long-term enteral feeding. With intensive dysphagia therapy, many patients will experience resolving deficits or improvement in swallowing ability. These patients require an appropriate strategy to transition from tube to oral feeding. This article reviews some of the basic characteristics of dysphagia and identifies specific swallowing difficulties in 2 groups of patients who often benefit from temporary enteral feeding: stroke survivors and patients treated for head and neck cancer. Specific suggestions are offered for clinical strategies to reinstitute oral feeding in these groups of tube-fed patients.
The History of Surgically Placed Feeding Tubes

G Minard

Abstract
Although supplemental enteral nutrition may have first been delivered by enema, the modern era of surgically placed feeding tubes began in the mid to late 1800s. Early procedures were generally disastrous, however, techniques rapidly improved. The basic techniques of surgical enteral access have not changed significantly in the last century, although endoscopic, radiologic and laparoscopic modifications have been described and adopted in the last 25 years. This article reviews some of the landmark surgical highlights in the United States and European literature regarding surgical enteral access.

Enteral Feeding Enriched with Carotenoids Normalizes the Carotenoid Status and Reduces Oxidative Stress in Long-Term Enterally Fed Patients

N Vaisman, G R M M Haenen, Y Zaruk, C Verduyn, J G Bindels, S Verlaan and E P Meijer

Abstract
Background & aims: Circulating carotenoid levels decrease progressively in patients receiving long-term enteral tube feeding with carotenoid-free formulas. Low dietary intake and low blood levels of carotenoids are associated with a higher risk of morbidity and mortality from chronic diseases. The aim of this study was to examine the effects of a low dose carotenoid mixture (3-mg/1500 kcal) for 3 months on serum carotenoid levels and oxidative stress in patients receiving long-term enteral nutrition as the sole source of nutrition. Methods: This randomized, double blind, controlled study compared patients receiving enteral nutrition with carotenoids (N=26) and without carotenoids (control group; N=25). Results: Patients on long-term enteral nutrition had low baseline serum carotenoid levels. Three months of enteral feeding enriched with carotenoids significantly (P<0.01) increased serum carotenoid levels compared with the control group. Oxidative stress as measured by NF-\(\kappa\)B levels was decreased at 3 months compared with the control group (P<0.05). No significant changes in MDA levels were observed during the study period in either group. Conclusions: This study demonstrated that enteral nutrition containing small amounts of carotenoids (3-mg/1500 kcal) in patients requiring long-term enteral feeding normalizes serum carotenoid levels to the lower end of the range found in age-matched controls. The NF-\(\kappa\)B data indicate a reduction in oxidative stress in these patients. Therefore, the use of formulas containing a mixture of carotenoids should be recommended for long-term enteral nutrition.
Early Transpyloric Enteral Nutrition in Critically Ill Children

C Sánchez, J López-Herce, A Carrillo, S Mencía and D Vigil

Abstract
Objective: We compared the tolerance of early (within the first 24 h after admission to the pediatric intensive care unit) and late transpyloric enteral nutrition in critically ill children. Methods: We performed a prospective observational study including all critically ill children fed using transpyloric enteral nutrition. The clinical characteristics, energy intake, tolerance, and complications of nutritional delivery between the children with early (first 24 h) and late (after 24 h, range 1-43 d) transpyloric enteral nutrition were compared. Results: Transpyloric nutrition was started within the first 24 h in 202 (38.5%) of the 526 children. There were no differences in the diagnoses, incidence of organ disturbances, doses of vasoactive drugs, or mortality between the two groups. There were no differences in the maximum number of calories delivered or in the duration of the nutrition between children with early and late transpyloric nutrition. The incidence of abdominal distention was lower in the children receiving early transpyloric nutrition (3.5%) than in those receiving nutrition at a later date (7.8%; P < 0.05). Moreover, 6.3% of patients presented diarrhea, with no difference being found between the two groups. Conclusion: Early transpyloric enteral nutrition is well tolerated in critically ill children and is not associated with an increase in incidence of complications.

Safe Placement of Nasogastric Tubes in Children

C Wilkes-Holmes
Paediatric Nursing (2006) 18(9): 14-17

Abstract
Insertion of nasogastric tubes is a common nursing procedure but practice rituals and unfounded assumptions can compromise safety. Current methods for checking the position of nasogastric tubes are not always suitable in children but there is limited guidance on how to proceed when gastric placement cannot be determined. As a result of a local adverse incident, a working party challenged the assumptions and rituals of practice using an evidence-based framework. A nasogastric tube algorithm was developed using a risk assessment approach to improve the safety of children in hospital and community settings.
Tolerance and Efficacy of Enteral Nutrition in Traumatic Brain-Injured Patients Induced Into Barbiturate Coma

G V Bochicchio, K Bochicchio, S Nehman, C Casey, P Andrews and T M Scalea

Abstract

Background: There is a paucity of data evaluating the efficacy of nutrition support in traumatic brain-injured patients induced into barbiturate coma for refractory intracranial hypertension. Our objective was to evaluate the efficacy of enteral nutrition in a select group of trauma patients. Methods: Prospective data were collected on severe traumatic brain-injured patients over a 4-year period. Patients were stratified by whether or not they were induced into a barbiturate coma. Barbiturate coma was defined as per American Association of Neurological Surgeons (AANS) guidelines. All patients were initially fed via the enteral route via a nasogastric feeding tube. Patients who did not tolerate feedings within 48 hours started receiving prokinetic agents. Feeding tolerance was defined as ability to tolerate enteral feedings with <150 mL of gastric residuals every 6 hours for >72 hours.

Results: Fifty-seven patients were induced into a barbiturate coma. All were victims of blunt-force trauma. Forty-two of 57 (74%) patients were men, with a mean age of 37 ± 12 years and a mean injury severity score of 24 ± 10. Thirty-eight of the 57 (67%) patients had an isolated traumatic brain injury. All 57 patients failed enteral nutrition via the nasogastric route after the first 48 hours of nutrition initiation after barbiturate coma was fully achieved by protocol criteria. Prokinetic agents demonstrated no improvement in feeding tolerance after the subsequent 48-72 hours. Of the 12 patients who had a postpyloric feeding tube placed, only 25% tolerated enteral nutrition for >48 hours.

Conclusions: Patients with traumatic brain injury induced into barbiturate coma develop a significant ileus that is refractory to prokinetic agents. Only a marginal improvement is seen when the postpyloric route is obtained. Early parenteral nutrition should be considered in this patient population.

Implementing Feeding Guidelines for NICU Patients <2000 g Results in Less Variability in Nutrition Outcomes

J L Street, D Montgomery, S C Alder, D K Lambert, D R Gerstmann and R D Christensen

Abstract

Background: We devised a consistent approach to instituting and advancing enteral nutrition among neonatal intensive care unit (NICU) patients <2000 g birth weight. We then assessed variability in feeding-related outcomes during a period before (period 1) vs after (period 2) implementing these guidelines. Methods: Using data from period 1 vs period 2, we statistically compared the equivalence of variance, focusing on certain feeding-related outcomes. Specific outcomes we chose to examine were (1) day of life when the first enteral feedings were given, (2) number of days during the entire hospitalization when no feedings were given, (3) number of days parenteral nutrition (PN) was administered, and (4) day of life when feedings of 80 mL/k/d and 100 kcal/k/d enteral were achieved. Results: Fifty-eight patients <2000 g were admitted to the NICU in period 1, of which 56 survived to discharge home. In period 2, 68 patients <2000 g were admitted and 66 survived to discharge. Demographic features of the patients in periods 1 and 2 did not differ. In both periods, feedings were begun on a median of day 1. However, in period 1 the range was from day 0 to day 24, and in period 2, the range was from day 0 to day 6 (equivalence of variance p < .001). After feedings were initiated, they were withheld for a median of 2 days (range, 0-23) during the remainder of the hospitalization in period 1 vs a median of 1 day (range, 0-12) in period 2 (p < .001). During period 1, PN was used for a median of 10 days (range, 0-72) vs 7 (range, 0-47) in period 2 (p = .001). During period 1, more variability occurred in the day of life when 80 mL/k/d and 100 kcal/k/d were achieved (both p < .001). No differences were seen in necrotizing enterocolitis, intestinal perforation, mortality, or length of hospital stay. Conclusions: Implementing feeding guidelines was associated with significantly less variability in feeding-related outcomes. We speculate that this is a reflection of better feeding tolerance, which resulted from a more consistent approach to initiating and advancing enteral feedings.
Nutrition Support and the Chronic Critical Illness Syndrome

J M Hollander and J I Mechanick

Abstract
Critical illness can be viewed as consisting of 4 distinct stages: (1) acute critical illness (ACI), (2) prolonged acute critical illness, (3) chronic critical illness, and (4) recovery. ACI represents the evolutionarily programmed response to a stressor. In ACI, substrate is shunted away from anabolism and toward vital organ support and inflammatory proteins. Nutrition support in this stage is unproven and may ultimately prove detrimental. As critical illness progresses, there is no evolutionary precedent, and man owes his life to modern critical care medicine. It is at this point that nutrition and metabolic support become integral to the care of the patient. This paper (1) delineates and develops the 4 stages of critical illness using current evidence, clinical experience, and new hypotheses; (2) defines the chronic critical illness syndrome (CCIS); and (3) details an approach to the metabolic and nutrition support of the chronically critically ill patient using the metabolic model of critical illness as a guide. It is our hope that this clinical model can generate testable hypotheses that can improve the outcome of this unique population of patients.

Hypocaloric Feeding of the Critically Ill

M Boitano

Abstract
During critical illness, the stress response causes accelerated gluconeogenesis and lipolysis, leading to hyperglycemia and elevated serum triglyceride levels. The traditional nutrition support strategy of meeting or exceeding calorie requirements may compound the metabolic alterations of the stress response. Hypocaloric nutrition support has the potential to provide nutrition support without exacerbating the stress response. Studies have shown hypocaloric nutrition support to be safe and to achieve nitrogen balance comparable with traditional regimens. Benefits shown include improved glycemic control, decreased intensive care unit (ICU) length of stay (LOS), and decreased ventilator days and infection rate; however, not all studies have produced identical results. Providing adequate dietary protein has emerged as an important factor in efficacy of the hypocaloric regimen. Although it is inconclusive, currently available research suggests that a nutrition support goal of 10-20 kcal/kg of ideal or adjusted weight and 1.5-2 g/kg ideal weight of protein may be beneficial during the acute stress response. Well-designed, randomized, controlled studies with adequate sample size that evaluate relevant clinical outcomes such as mortality, ICU LOS, and infection while controlling for factors such as glycemic control, severity of illness, incorporation of calories from all sources, in addition to feeding regimens, are needed to definitively determine the effects of hypocaloric nutrition support.
Effect of Severe Undernutrition and Subsequent Refeeding on Gut Mucosal Protein Fractional Synthesis in Human Subjects

T A Winter, S J O’Keefe, M Callanan and T Marks


Abstract

Objective: Undernutrition has been associated with gut mucosal atrophy, impaired absorption, and increased permeability. This study investigated the effect of severe undernutrition and subsequent refeeding on gastric and duodenal mucosal protein fractional syntheses (MPFS).

Methods: MPFS was investigated in the gastric body, antrum, and duodenum of 23 severely undernourished patients by means of 14C-leucine incorporation into tissue protein and repeated after a period of refeeding. Results were evaluated in comparison with a group of 22 healthy controls and presented as mean ± standard error of the mean.

Results: The mean body index of the undernourished patients was 13.29 ± 0.33 kg/m² versus 22.67 ± 0.63 kg/m² in the controls (P < 0.001). MPFS in the controls and undernourished patients were similar (gastric body, 36.49 ± 2.88 versus 33.41 ± 3.08%/d; gastric antrum, 25.51 ± 2.20 versus 24.95 ± 2.32%/d; duodenum, 25.90 ± 2.58 versus 25.49 ± 1.99%/d). After refeeding, the body mass index of the undernourished patients increased to 15.87 ± 0.44 kg/m² (P < 0.001). The MPFS increased significantly (gastric body, 51.80 ± 8.12%/d, P < 0.05; gastric antrum, 33.44 ± 3.66%/d, P < 0.05; duodenum, 46.27 ± 8.02%/d, P < 0.01), with the MPFS of the duodenum significantly greater than the control values (P = 0.01). Conclusion: Despite severe undernutrition, MPFS of the gastric body, antrum, and duodenum remained similar to control values. Enteral feeding resulted in a significant increase in MPFS, indicating a trophic response.

Analysis of Sites of Bacterial Contamination in an Enteral Feeding System

E M H Mathus-Vliegen, M W J Bredius and J M Binnekade


Abstract

Background: Contamination of enteral feedings is an often overlooked source for bacterial infection in the intensive care unit. A new 1-L enteral feeding system with minimal chances of touching critical areas (Nutrison Pack) was compared with routinely used 0.5-L glass bottle systems. Methods: Patients admitted to intensive care were randomized to Pack or glass bottle feeding systems. Cultures were taken from the delivery sets 5 times during the day and from feeding containers and different sites of the system after 24 hours. Results: Bacteria were present in 3 of 112 glass bottles and in 2 of 95 Pack bags. True bacterial contamination (defined as >10³ colony-forming units/mL, with same bacteria also present in the delivery set) was found in none of the Packs with a 12-h (69 Packs) or a 24-h (26 Packs) hanging time and in only 1 of the glass bottles with a hanging time of 24 hours, which exceeded the advised hanging time of 8 hours. In contrast, the contamination rate of delivery sets was 48%, with increasing bacterial counts over the day and 4 subsequent days. Bacteria mainly belonged to the group of potentially pathogenic bacteria (Enterobacteriaceae and Pseudomonaceae). They likely originated from throat, lungs, and stomach and grew into and along feeding tubes upwards until they reached the delivery set. Conclusions: Prolonged hanging times of Pack bags were safe with respect to bacterial contamination. However, the bacterial safety of enteral feedings is more likely to be endangered by the endogenous route of contamination rather than exogenous contamination, as high bacterial counts were found in feeding tubes and delivery sets as a result of retrograde growth.
A Microbiologic Study of Enteral Feeding Hang Time in a Burn Hospital: Can Feeding Costs be Reduced Without Compromising Patient Safety?

A N Neely, T Mayes, J Gardner, R J Kagan and M M Gottschlich

Abstract

Background: Procedural changes for hospitalized patients must always balance safety with fiscal constraints. Microbiologic contamination of enteral feeding solutions has been previously associated with nosocomial infections. Formula manipulation and hang time contribute to microbial load, and there is considerable variation in hang time recommendations in the medical literature. With cost containment in mind, the purpose of this performance improvement study was to determine if an increase in hang time of a modular tube feeding product would increase microbial load or affect the nosocomial infection rate in pediatric burn patients.

Methods: This biphasic trial initially evaluated the microbial load of the feeding after delivery of two 4-hour aliquots into a container using the same delivery set (total hang time of 8 hours; number of tests = 20). Second, once this feeding procedure was deemed microbiologically safe, tube feedings were administered to patients, and both microbial load and nosocomial infection rate were monitored for 1 year.

Results: Contamination levels at the end of the 8-hour period using the same feeding set with 2 consecutive 4-hour feeding aliquots (number of tests = 38) were lower than standard recommendations. The hospital’s nosocomial infection rate was not altered by this procedural change, and feeding-set expenses were reduced.

Conclusions: The hang time of our enteral feeding administration set can be increased safely from 4 hours to 8 hours, with the tube feeding preparation added as two 4-hour aliquots without a significant change in microbial load or nosocomial infection rate, thus promoting simultaneous fiscal responsibility and patient safety.

Fostering Coping Skills and Resilience in Home Enteral Nutrition (HEN) Consumers

C W Thompson, L Durrant, A Barusch and L Olson

Abstract

Background: Home enteral nutrition (HEN) is a lifesaving therapy that provides benefits along with countless challenges. This qualitative study examined how HEN consumers learned to cope successfully with HEN-related challenges and uncovered how healthcare providers could help foster the process of coping in other HEN consumers.

Methods: Twelve adult HEN consumers who perceived that they were coping successfully and overcoming the adversity associated with HEN, and met the criteria for resilience using the Resilience Scale, self-selected for the study. Participants engaged in a series of 2 in-depth interviews. Data were coded and analyzed using grounded theory methodology.

Results: One overarching theme and 5 main categories emerged from the data, revealing that these individuals coped successfully with HEN by developing an attitude of personal responsibility to accept new life conditions, take charge of their own well-being, seek and accept support, maximize independence and normality, and focus on the positive. In addition, these participants used a variety of problem- and emotion-focused coping strategies and shared resilient characteristics such as self-efficacy and perseverance.

Conclusions: Implications for clinical practice and HEN education, along with suggestions for healthcare providers to foster coping with HEN are provided. An educational manual with self-help suggestions for adult HEN consumers is also available at http://www.copingwell.com.
The Impact of HETF for Adults with Neurological Conditions

A Brotherton and C Lyons


Abstract

The number of patients receiving home enteral tube feeding (HETF) in the UK is growing, despite little evidence that it improves survival or quality of life in many cases. There is also little work that has been done to explore the emotional impact of this invasive procedure on patients or carers. This article draws on a literature review to highlight some of the issues that may arise with patients receiving HETF, focusing particularly on the largest group of these patients: those with neurological conditions. The literature shows that emotional adjustments are required for both patient and carers following the placement of a percutaneous endoscopic gastrostomy. Therefore consideration of the likely emotional and psychological consequences of home enteral tube feeding has implications for clinical practice during the decision-making process for appropriate patient selection. There is a need for community nurses to consider these issues and ensure appropriate support is provided for patients and their carers.

Taste Preferences for Oral Nutrition Supplements in Patients Before and After Pelvic Radiotherapy: A Double-Blind Controlled Study


Abstract

Background & aims: No data exists about the effect of pelvic radiotherapy on taste preference for oral nutrition supplements, including elemental diet, which may prevent gastrointestinal symptoms if taken during pelvic radiotherapy. This double blind study aimed to: (1) examine the palatability of elemental, peptide and polymeric oral nutrition supplements in patients with pelvic malignancies compared with healthy controls (2) assess changes in taste preference following pelvic radiotherapy (3) develop a reliable scale to measure taste preference. Methods: Subjects blind tasted six 30 ml oral nutrition supplement samples, one duplicated, before and after 5 weeks of treatment (or the same time interval for controls). A Likert scale was used to score preference. Results: Fifty patients and 50 controls were recruited. Before radiotherapy, patients had a lower mean preference for the peptide formulation than the other oral nutrition supplements (P<0.001). There were no significant differences in preferences between patients and controls (P>0.2 all supplements). Radiotherapy did not affect supplement preference. Conclusions: Patients with pelvic malignancy and healthy controls rate elemental nutritional supplements as highly as polymeric supplements and significantly better than peptide supplements. This trend continues even after pelvic radiotherapy. A Likert scale is a reliable tool in this scenario.
Nutritional Risk Index Predicts a High-Risk Population in Patients with Obstructive Jaundice

A Clugston, H M Paterson, K Yuill, O J Garden and R W Parks

Abstract

Background: Malnutrition is common in obstructive jaundice but is difficult to define. The aim of this study was to compare definitions of malnutrition in patients with obstructive jaundice to identify correlation with mortality, complications and length of hospital stay after intervention. Methods: Prospective case-control study comparing 39 inpatients with obstructive jaundice with 21 controls. Body mass index (BMI), skin-fold thickness (TSF), mid-arm muscle circumference (MAMC), percentage weight loss, nutritional risk index (NRI) and malnutrition universal screening tool (MUST) were measured and compared. Duration of admission, interventions, complications and outcome were recorded prospectively. Results: Patients with obstructive jaundice were significantly malnourished compared to controls. Severe malnutrition was equally prevalent in benign and malignant disease. Malnourished patients had higher mortality and longer duration of stay after intervention compared to non-malnourished patients. NRI<83.5 was significantly associated with mortality and longer duration of hospital admission but not complication rate. Conclusion: NRI is simple to use and defines a high-risk sub-group of patients with obstructive jaundice.

The Nutritional Status of Frail Elderly with Care Needs According to the Mini-Nutritional Assessment

S Izawa, M Kuzuya, K Okada, H Enoki, T Koike, S Kanda and A Iguchi

Abstract

Background and aims: Although malnutrition is common in the geriatric population, the relationship between frail elderly with various care needs and nutritional status remains unknown. The purpose of this study was to analyze the association between subjects with higher care needs and poorer nutritional status in the Japanese community-dwelling frail elderly. Methods: A total of 281 community-dwelling elderly subjects from day-care centers (81.9±7.2 yr of age mean±SD; 72 men and 209 women) who were eligible for Long-Term Care Insurance were enrolled in this study to evaluate their nutritional status using the mini-nutritional assessment. The levels of care needs of participants were classified into six levels according to the Long-Term Care Insurance program. Results: According to the mini-nutritional assessment classification, 39.9%, 51.2%, and 8.9% of the participants were assessed as well-nourished, at-risk of malnutrition, and malnourished, respectively. There were significant differences among the six groups with regard to the nutritional status; subjects with higher care needs were associated with poorer nutritional status. In the higher care needs group, more than half of the subjects did not know their weight change during 3-month intervals. Conclusions: The population of elderly with higher care needs in the community is associated with a higher prevalence of malnutrition.
The State of the Provision of Nutritional Care to Hospitalized Patients-Results From The Elan-Cuba Study

S Santana Porbén

Abstract
Current nutritional care provision to 1905 patients hospitalized in 12 Cuban hospitals is presented in this article, diagnosed after conducting the Hospital Nutrition Survey (HNS), as part of the activities comprising the Cuban Study of Hospital Malnutrition (Elan-Cuba). The obtained HNS results were contrasted with standards regarding the nutritional assessment of hospitalized patient, the diagnosis of nutritional disorders occurring in the patient, and the identification of patients in need of nutritional intervention. The Elan-Cuba Study returned a 41.2% malnutrition rate [Barreto Penié J, Cuban Group for the Study of Hospital Malnutrition. State of malnutrition in Cuban hospitals. Nutrition 2005;21:487-97]. However, malnutrition was recorded as an independent diagnosis in only 0.4% of the surveyed clinical charts. It could not be shown that medical care teams were systematically applying any of the techniques and procedures recommended for the assessment of the nutritional status of hospitalized patients. In the best of the cases, only 40.6% of the surveyed patients had their height and weight recorded in their clinical charts at admission, 9.0% of those with more than 15 days of hospitalization had a prospective value of weight, and less than 20.0% of them had their serum albumin levels and/or their counts of Lymphocytes annotated on their clinical charts. Although 10.9% of the surveyed patients (median of the subcategories values; range: 3.5-41.2%) fulfilled an indication for nutritional intervention, support (enteral and/or parenteral) was only provided to less than 15.0% of them, with the exception made of patients on NPO, of whom 32.3% received either of the two modes of artificial nutrition listed above. It is to be noticed that none of the patients with chronic organic failure were on nutritional support at the time of the survey. The current nutritional care provision to the hospitalized patient might explain the increased rates of hospital malnutrition documented in the Elan-Cuba Study, and should lead to the design and urgent implementation of nutritional and metabolic intervention programs in the surveyed hospitals, given the deleterious effects of nutritional disorders upon the ultimate results of the medical and surgical actions, and the quality and costs of medical care.
Additional Anthropometric Measures May Improve the Predictability of Basal Metabolic Rate in Adult Subjects

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Abstract

Background: The most commonly used predictive equation for basal metabolic rate (BMR) is the Schofield equation, which only uses information on body weight, age and sex to derive the prediction. However, because body composition is a key influencing factor, there will be error in calculating an individual’s basal requirements based on this prediction. Objective: To investigate whether adding additional anthropometric measures to the standard measures can enhance the predictability of BMR and to cross-validate this within a separate subgroup. Design: Cross-sectional study of 150 Caucasian adults from Scotland, with a body mass index range of 16.7-49.3 kg/m\(^2\). All subjects underwent measurement of BMR, body composition, and 148 also had basic skinfold and circumference measures taken. The resultant equation was tested in a subgroup of 39 obese males. Results: The average difference between the predicted (Schofield equation) and measured BMR was 502 kJ/day. There was a slight systematic bias in this error, with the Schofield equation underestimating the lowest values. The average discrepancy between predicted and actual BMR was reduced to 452 kJ/day, with the addition of fat mass, fat-free mass, an overall 10% improvement on the Schofield equation (P=0.054). Using an equation derived from principal components analysis of anthropometry measurements similarly decreased the difference to 458 kJ/day (P=0.039). Testing the equation in a separate group indicated a 33% improvement in predictability of BMR, compared to the Schofield equation. Conclusions: In the absence of detailed information on body composition, utilizing anthropometric data provides a useful alternative methodology to improve the predictability of BMR beyond that achieved from the standard Schofield prediction equation. This should be confirmed in more individuals, both within the obese and normal weight category.
Further references on nutrition support published in the last quarter where abstracts are not available.

- Jordan P (2006) Improving Nutritional Care in Older People. Nursing and Residential Care 8(12): 552-554. This article discusses the nutritional needs of the older person and the barriers that may exist preventing them meeting their requirements. It also discusses the adverse effects of under nutrition and mentions the NICE guidelines.

- Edwards P and Hartwell H J (2006) Hospital food service: a comparative analysis of systems and introducing the ‘Steamplcity’ concept. Journal of Human Nutrition and Dietetics. 19(6): 421-430. This article looks at a new concept that through the application of a static, extended choice menu and revised patient ordering procedures with new cooking process that provides individual patient food heated/cooked at ward level to improve intake.

- Ireton-Jones C et al. (2006) Home Nutrition Support From the Patient’s Perspective: The Real Reality Story! Nutrition in Clinical Practice 21(6): 542-543. This article, as the name suggests, looks at patient’s perception of home nutrition support. It follows 3 patients all receiving nutrition support and the challenges that this poses on their own individual life-styles.


- B E Mikkelsen, A M Beck and A Lassen (2007) Do recommendations for institutional food service result in better food service? A study of compliance in Danish hospitals and nursing homes from 1995 to 2002-2003. European Journal of Clinical Nutrition 61: 129-134. This article features a questionnaire-based study that was carried out among foodservice managers in Danish hospitals. It concludes that the attempts to improve the nutritional status of hospital patients and nursing home residents seem to have failed. It also states that the initiatives taken to improve the situation seem relevant and also that the nursing homes might benefit from advantage of these experiences.

- Wright J (2006) Maintaining Optimum Nutrition. Journal of Community Nutrition 20(11): 43-50. This article aims to offer practical advice on the differing ways in which community practitioners can influence a patients’ diet and the fact that malnutrition can lead to many physiological problems that compromise patient recovery and require treatment. It also highlights that problems may occur due to disease or because of the side effects of treatment.

- Nguyen N et al. (2007) Feed intolerance in critical illness is associated with increased basal and nutrient-stimulated plasma cholecystokinin concentrations. Critical Care Medicine 35(1): 82-88. This article looks at delayed gastric emptying and intolerance to gastric feeding that occurs frequently in the critically ill. The aim of this study was to determine plasma CCK concentrations during fasting and in response to small-intestine nutrient infusion in critically ill patients.

- Smith A (2006) What's new in Nursing Home Nutrition? Complete Nutrition 6(6): 9-11. This article looks at nursing home nutrition and the age concern article ‘Hungry to be Heard’. It also brings in the NICE guidelines (32) on Nutrition support in adults and looks at its recommendation of the use of the MUST screening tool. Smith talks of the challenges that face individuals involved in nutrition and the attitudes of G.P’s when it comes to prescribing, she also talks about the various initiatives and individuals involved in trying to improve the situation.

- Lewis S and Dobson J (2006) Improving Compliance with Oral Sip Feeds in Cancer Patients. Complete Nutrition 6(6): 21-23. This article looks at the prevalence of malnutrition in cancer patients and the need for supplementation, firstly in the form of food fortification and then with the use of supplements.


- Richmond J (2006) Developing the Role of a Ward Housekeeper Within a Multidisciplinary Team. British Journal of Nursing 16(1): 56-59. This article looks at the roles of a housekeeper within a ward and the success of implementing an induction competency programme to share best practice. It looks at their role in delivering on standards for nutrition and the importance of multidisciplinary working.