

SASPEN Congress 2011

The total is greater than the sum of the parts

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When should we change our practises? An unplanned theme emerged in the first session – the time to change is now! Prof. P Wischmeyer, University of Colorado, USA, presented ample evidence that glutamine is an indispensable nutrient that needs to be supplemented in the critically ill patient. The evidence presented indicated that glutamine supplementation improved beneficially influenced such clinical parameters as length of stay (LOS), infection rate and mortality. One of the mechanisms by which glutamine mediates its beneficial effects is its effect on heat shock proteins..

There are always burning issues or controversies (real or perceived) in nutrition support. Prof JA Ker, University of Pretoria, showed the epidemiological and observational evidence between Vitamin D insufficiency and diverse diseases such as cardiovascular disease, various cancers, immune dysfunctions, neurological diseases as well as the inflammatory state. Well-designed trials of vitamin D supplementation in these disease states are lacking. The question paused was , is it ethical to withhold vitamin D supplementation from vitamin D deficient individuals or high risk individuals in order to conduct such trials? Maybe the time to change our practice is now, particularly in high risk individuals.

Often the public sees supplements as safe and assumes that “more is better”. For many years calcium supplementation has been advocated for the prevention of osteoporosis and fractures. Prof D Labadarios presented the available evidence and concluded that supplemental calcium does not reduce the risk for osteoporosis or osteoporotic fractures. On the other hand, dietary intake of less than 800mg calcium is associated with increased fracture risk. In addition, a higher calcium intake from supplements, in the presence of an adequate dietary intake, did not further reduce the risk for fracture, but was in fact associated with a higher hip fracture risk. Patients with self-perceived lactose intolerance often have a low calcium intake and a higher rate of diabetes and hypertension. In relation to body weight, recent data indicate that the effect, if any, of calcium

supplementation on weight maintenance is of no clinical significance. Calcium intake from dairy product appears advantageous, without the reported risks associated with supplements. On the basis of the available evidence, it would be prudent to change current practice of recommending calcium and vitamin D supplements to recommending food and sunshine!

On the gastrointestinal front, Ms A Prins discussed data on the fast emerging field of brain-gut interactions. Impaired communication between the brain and the gut may be the basis of many diseases such as inflammatory bowel disease, irritable bowel disease and non-cardiac chest pain, among others The possible brain-gut communication routes and their implication, were discussed in relation to the irritable bowel disease. Prof R Blaauw explained the mechanism of action of probiotics. She highlighted the clinical settings in which the current evidence supported the beneficial use of probiotics, the importance of specific strains, and the controversy regarding the safety aspects of probiotics in critically ill patients. Motility disorders in critically ill patients are one of the main reasons for failed enteral nutrition in many patients. Mrs I Retief summarised the functional gut impairment associated with critical illness and how to identify the at risk patients during assessment. She further discussed the approach to GI function assessment and explained the controversial role of gastric residual volumes and provided the current guidelines for the treatment of motility disorders in the critically ill patient.

A variety of topics were addressed in the perioperative nutritional management of patients and included pre-operative thirsting and fasting (Dr M Van Dyk), management of sodium disorders (Dr R Siebert) and peri-operative nutrition support (Ms V Kotze). Traditionally, patients have been kept NPO for about 12 hours pre-operatively. Dr M Van Dyk explained why this practice was outdated and what the detrimental implication thereof might be. She discussed the new guidelines for shorter pre-operative thirsting and fasting. Dr

Richard Siebert discussed the multiple aetiology of sodium disorders. He addressed the types of hypo- and hypernatraemia as well as their management. Ms V Kotze presented on the importance of peri-operative nutrition support, which is associated with improved clinical outcomes. She discussed the various societies' guidelines in terms of peri-operative nutrition support and emphasized the Enhanced Recovery After Surgery (ERAS) protocols and guidelines as well as the safety of preoperative nutrition support and the role of immunonutrients.

Mrs J Visser presented on the importance of micronutrient supplementation in critical illness. She discussed the latest evidence on the efficacy of current practices (amongst other the SIGNET trial and the ongoing REDOX study), new fields of interest (Vitamin D and Vitamin B12), current guidelines of the various societies and recommendations and reflected on future developments and critical areas in the field in need of further research.

In the second day of the Congress, Prof. P Wischmeyer addressed on ICU-acquired weakness and highlighted the role of nutrition (pharmakonutrients, sport nutrients and other anabolic agents) as well as the introduction of minimal physical activity early in the recovery phase. In the interaction of neurology and nutrition, Dr W Duim highlighted the importance of early treatment of stroke patients and emphasized the beneficial role of early nutrition support. Malnutrition is common in stroke patients and often worsens during hospitalisation due to incorrect feeding practices. In addition, delayed nutrition support, as well as hyperglycaemia, has a negative influence on functional outcomes. Mrs M Barnes reminded delegates that swallowing disorders are common in various diseases, including those following stroke and that apart from resulting in malnutrition, it also severely impacted on quality of life. She discussed the types of swallowing and dysphagia as well as their signs and symptoms. She also discussed the importance of starting therapy early after a stroke and the roles of a dietitian and speech therapist working together in a stroke rehabilitation team. Dr C Guldenpfennig addressed the role of nutrient deficiencies in neurological diseases. Malnutrition is common in neurological disorders due to swallowing difficulties, loss of motor skills, cognitive impairment and recognition, amongst others. Nutritional assessment and support is essential from an early stage in such clinical settings. He discussed the approach to the nutritional support of such patients, and the role of micronutrient supplementation in the prevention and treatment of diseases such as motor neuron disease and Alzheimer's disease as well as the latest guidelines of the Institute of Medicine for traumatic brain injury.

The overweight and underweight patient is always a challenge in the ICU. Prof G Tintinger discussed the pathophysiology of obstructive sleep apnoea and the role of the dietitian in the management of these patients. Ms B Harmse reminded delegates that there is more than "the weight" issue to our patients. She pointed out the need for the better understanding of "what and how" to feed optimally in view of the prevailing uncertainty of some feeding targets, against the

available evidence indicating that many patients in the ICU fail to meet their nutritional requirements.

In the section on paediatric nutrition, Ms C Nieuwoudt afforded perspective on the management of the child with cancer, Prof S Valaphi on the management of the critically ill infant Ms B Saayman on the use of alternative lipid emulsion in paediatric TPN and (Ms EVn Niekerk on the role of probiotics in preterm infants). Ms C Nieuwoudt highlighted that children with cancer are often malnourished at the point of diagnosis, or are at great risk of becoming malnourished during treatment. She indicated that it is also well-known that malnutrition, both over- and under-nutrition, has a negative impact on the long-term potential and quality of life of such children. She further pointed out that despite many efforts there are still no clear guidelines to provide optimal nutrition support for children with cancer and nutrition practitioners are often faced with the challenge to translate preclinical findings into clinical strategy to provide evidence-based nutrition intervention for all children with cancer. Prof S Valaphi pointed out that although the survival of preterm infants has improved over the years, there are major concerns about the morbidities seen among survivors. He drew attention to preterm birth outcomes being associated with deficits in IQ and neurodevelopment. It was therefore important that all preterm infants should receive early TPN while enteral nutrition is gradually introduced. The recommendations for TPN as well as the parameters for monitoring were discussed. Ms B Saayman indicated that parenteral nutrition associated liver disease is one of the complications of long term TPN in the paediatric patient and that administration of lipid emulsions is one of the contributory factors. Since the omission of lipids from the TPN is not an option (due to further complications) mixed, as opposed to single, lipid sources should be considered. She presented data to show that SMOF lipid administration is associated with improved outcomes in the paediatric population. Mrs E Van Niekerk drew attention to pre-term infant being at higher risk of developing Necrotizing enterocolitis (NEC) and discussed the pathophysiology of NEC, including the role of bacterial flora. Probiotics in this population reduced all-course mortality and had beneficial NEC on outcomes. The importance of strain selection, dose and optimal introduction times as well as safety and monitoring were highlighted.

Day 2 was concluded by Prof Nthle who guided delegates on the management of the irate patient, ethically. It was pointed out that such a patient may have been incorrectly treated, the treatment administered may have been perceived as being wrong, the patient may be on drugs/alcohol, have poor home relationships, all of which may be due to underlying disease or, alternatively, the patient may be truly disturbed. The crucial aspect in the treatment of such a patient is to have a plan in place – prevention is better than cure- to remain calm and to remember the 4 pillars of ethics: beneficence, autonomy, non-maleficence and justice.

In the section of the implications of the medical management of a patient on nutrition support, Dr M Van Dyk showed how illness and

the acute phase response influence organ function. She proceeded to show how these organ function changes as well as their management may cause nutrition status aberrations. Dr M Van Zyl's lecture on the effects of drugs on nutrition summarized nutrient-medication interactions, dosing instructions in terms of food intake, the effects of drugs on weight loss and gain, drugs associated with various GIT complications taste changes and olfactory disturbances. Prof P Wischmeyer elucidated the role of arginine as a pharmaconutrient. He explained why arginine is beneficial in surgical patients, but associated with harm in septic patients and as such the need to understand the mechanism by which pharmaconutrients exert their effect, harmful or beneficial.

Prof PWischmeyer concluded the congress with a lecture on hospital malnutrition – is it calories or more?? Malnutrition is a neglected disease worldwide and in the hospital. Malnutrition in a hospitalized patient can be the cause of death, even post-discharge due to negligence and lack of urgency. Despite guidelines on early enteral feeding, 50% of patients are underfed! As such, it was recommended that nutrition practitioners need to start parenteral nutrition at the appropriate time and consider the appropriate mix of nutrients such as glutamine and omega-3 fatty acids, as well as the route of administration and blood glucose control.

This year's Congress also marked SASPEN's objective of expanding nutrition education beyond dietitians, thanks to a generous sponsorship. SASPEN's nursing congress programme, run in parallel to the main SASPEN Congress included a full day of stroke care, from admission to discharge, and in the second day various challenges in our quest to supply optimal nutrition support for our patients were addressed from a nursing perspective.

As chairperson of the organising committee, I would like to thank, on behalf of the organising committee and the SASPEN Council, all the speakers and delegates who contributed to the success of the SASPEN 2011 Congress. SASPEN is SASPEN would also like to thank all our sponsors and exhibitors for their financial support, and the administrative Congress organisers for their excellent organisation of the congress. The Congress presentations can be accessed at www.saspencongress.co.za. The available manuscripts of the Congress presentations appeared as a supplement in the SAJCN September 2011 Congress issue



At the SASPEN Nurses Conference: Chris Popma (Nutricia), Arina Prins (conference convener), Janicke Visser (SAJCN), Prof Demetre Labadarios (SAJCN)

First Announcement

Critical 4 Africa

29 August – 2 September 2012
Sun City • North West Province • South Africa

Combined meeting
of CCSSA, SATS,
SASPEN & TSSA

Topics for
Copicon Plus 2012

- **The Critical Care Society of Southern Africa: Critical 4 Africa**
 - Advanced ICU strategies in a resource-limited environment: Does it work?
 - Teamwork in the SA ICU
 - Processing patients in the SA ICU
- **The South African Thoracic Society**
 - Clinical Implications & Management of Multi-drug resistant Pathogens including TB – Challenges for the 21st century
- **The Trauma Society of South Africa**
 - Critical Interventions in the Critically Injured

- **South African Society for Parenteral and Enteral Nutrition**
 - Inflammation & Nutrition: a Deadly Combination
- **Paediatric Critical Care**
 - Managing very severe pneumonia in the PICU (and much more)
- **Paediatric Pulmonology: The Year in Review**
 - Key opinion leaders review the latest and most exciting literature in SA paediatric pulmonology
- **Critical Care Nursing: From Good to Excellent**
 - Practice Development in Critical Care

For further information contact the Congress Office
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