

Abstract SSMI / SGI

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Testing a glutamine selenium and zinc containing enteral supplement after major trauma and burns – preliminary data.

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- Introduction** Glutamine (GLN) depletion is systematic in the critically ill patient and occurs early on after admission. In addition trauma and burn patients suffer acute selenium and zinc deficiency, compromising antioxidant defences. A series of trials have shown clinical benefit from early micronutrient supplementation. The goals of the present clinical study were to monitor the clinical introduction of an enteral GLN, Se and Zn containing supplement and to observe its influence on gastrointestinal tolerance and clinical outcome.
- Methods** Case control study with retrospective analysis of prospective data. Inclusion criteria: critically ill trauma and burn patients requiring enteral feeding. Enteral nutrition is by unit protocol. Introduced on January 2001, Intestamin® (Fresenius Kabi: 30 g GLN, 300 mcg Se, 30 mg Zn, 500 ml, 250 kcal/day) was delivered for 2-10 days from admission to the ICU, by the naso-enteric tube, starting within 72 hours of admission. Variables: demographic data, SAPSII, SOFA and ISS scores, daily total, intravenous (IV) and enteral energy delivery, length of mechanical ventilation and ICU stay, outcome.
- Results** Eighty patients were enrolled (40 cases + 40 matched controls), aged 42 ± 18 years, including 46 trauma (ISS 28 ± 8) and 34 burn patients (burns 30 ± 19 % body surface). The patients were critically ill (SAPS 38 ± 13), well matched for age, sex, and severity of injury. 701 days were analysed. Median Intestamin delivery per day was 480 ml in burns versus 320 ml in trauma patients for a median total dose of 4220 ml vs 1775 ml ($p=0.0003$). While IV energy delivery was similar in both groups over the first 10 days with 240 ± 250 kcal/day, enteral energy delivery was higher in the Intestamin group (1160 ± 860 vs 900 ± 880 kcal/day: $p=0.0001$). There was no difference in either length of mechanical ventilation or of ICU stay. There were no gastrointestinal side effects of the solution. Infectious complications and glucose tolerance are not yet available for analysis.
- Conclusion** The enteral delivery of the GLN, Se and Zn enriched supplement was well tolerated as reflected by the higher daily energy delivery in the intervention group, which corresponded to the 250 kcal delivered with the solution. There was no influence on length of mechanical ventilation or ICU stay.