

CLINICAL OUTCOME OF AN IMMUNE ENHANCING DIET IN A HETEROGENEOUS INTENSIVE CARE POPULATION

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Introduction: The efficacy of immune enhancing diets (IED) for the general Intensive Care Unit (ICU) population is currently under debate. The aim of this trial was to study the effect of a high protein enteral formula enriched with arginine, glutamine and antioxidants and containing omega-3 fatty acids and a mixture of fibers, on the clinical outcome of a heterogeneous ICU population.

Hypothesis: An IED given for at least 2 days will improve clinical outcome in a heterogeneous critically ill population when compared with a standard control diet. **Methods:** In this prospective, double-blind, controlled, two-center trial, adult ICU patients, without chronic renal failure and expected to require enteral tube feeding for more than 2 days were randomized to receive the IED or an isocaloric control formula. Main outcome parameters were in-hospital mortality, hospital and ICU length of stay (LOS) and complication rate. **Results:** A total of 597 adult ICU patients were randomized to receive the IED or a control formula. 473 patients met all inclusion criteria and were fed for more than two days, and included in the total group analysis. Baseline characteristics and formula intake were comparable in both groups. No differences in in-hospital ($p=0.185$) or 28-day mortality ($p=0.278$), hospital ($p=0.697$) and ICU LOS ($p=0.282$) or complication rates were found. **Conclusions:** This is the largest randomized, controlled trial on the effect of an IED on clinical outcome in a heterogeneous ICU population thus far. Results suggest that in the general ICU population the IED had neither beneficial nor harmful effects on the main clinical outcome parameters. These results are consistent with the literature that is currently available on the effect of IED on clinical outcome in these patients.