Tolerability and efficacy of a low-volume enteral supplement containing key nutrients in the critically ill.


Source

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Abstract

BACKGROUND & AIMS:

To compare early supplementation with antioxidants and glutamine using a low-volume enteral supplement containing key nutrients to an energy adjusted standard elementary diet and to investigate its effect on clinical efficacy and tolerability in critically ill patients with sepsis/SIRS. The primary endpoints were length of stay in the ICU and sufficient enteral feed.

METHODS:

This was a randomized, prospective, single-blind, controlled study in 58 critically ill patients (56.9% male, mean age 46.7 years, mean APACHE II score 21.6). They received either a low-volume enteral supplement containing key nutrients or a diluted standard nutrition solution. After 10 or 14 days inflammatory parameters, catecholamine need, and maximal enteral delivery were determined.

RESULTS:

Patients receiving a low-volume enteral supplement containing key nutrients did not reach sufficient enteral feed more often than controls (76 vs. 62%, respectively, p = 0.17). The difference in vitamin E and selenium uptake was higher in the treatment group than controls (12.4 vs. 3.7 and 54.7 vs. 16.3, respectively, p ≤ 0.011). Parameters such as fever, antibiotic treatment, artificial ventilation, and death were comparable. This was also true for days of ICU or hospital stay (33 ± 23 and 49 ± 34 days, respectively).

CONCLUSIONS:

The low-volume enteral supplement containing key nutrients was well tolerated and led to a better vitamin E and selenium supply. However, it did not affect length of ICU or hospital stay. Further studies are necessary to determine which disease-specific subgroups may benefit from this supplementation or which group may be harmed.