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

Schneider A, Markowski A, Momma M, Seipt C, Luettig B, Hadem J, Wilhelmi M, Manns MP, Wedemeyer J.

Source

Department of Gastroenterology, Hepatology and Endocrinology, Hannover Medical School, Carl-Neuberg-Str. 1, D-30625 Hannover, Germany. andrea.s.schneider@gmx.de

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, $p \leq 0.011$). 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.