
Abstract

BACKGROUND:
Infections are an important cause of morbidity and mortality in patients with multiple trauma. Studies in both animals and human beings have suggested that glutamine-enriched nutrition decreases the number of infections.

METHODS:
Patients with multiple trauma with an expected survival of more than 48 h, and who had an Injury Severity Score of 20 or more, were randomly allocated glutamine supplemented enteral nutrition or a balanced, isonitrogenous, isocaloric enteral-feeding regimen along with usual care. Each patient was assessed every 8 h for infection, the primary endpoint. Data were analysed both per protocol, which included enteral feeding for at least 5 days, and by intention to treat.

FINDINGS:
72 patients were enrolled and 60 received enteral feeding (29 glutamine-supplemented) for at least 5 days. Five (17%) of 29 patients in the glutamine-supplemented group had pneumonia compared with 14 (45%) of 31 patients in the control group (p<0.02). Bacteraemia occurred in two (7%) patients in glutamine group and 13 (42%) in the control group (p<0.005). One patient in the glutamine group had sepsis compared with eight (26%) patients in the control group (p<0.02).

INTERPRETATION:
There was a low frequency of pneumonia, sepsis, and bacteraemia in patients with multiple trauma who received glutamine-supplemented enteral nutrition. Larger studies are needed to investigate whether glutamine-supplemented enteral nutrition reduces mortality.