

Effects of early enteral nutrition in combination with probiotics on nutritional status, immune function and clinical outcomes in patients with stroke

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Background: Malnutrition is common in patients with stroke in the acute phase and has been associated with unfavorable short- and long-term outcomes. Whether early enteral nutrition combined with probiotics would improve patients' nutritional status, immune function and clinical outcomes remains largely elusive..

Materials and Methods: In this single-center prospective study, a total of 112 patients were randomized to receive parenteral nutrition (n=37), early enteral nutrition (n=38), or early enteral nutrition + probiotics (n=37) within 2 days after admission. Evaluated nutritional and immune function measures included prealbumin, albumin, transferrin, triceps skinfold thickness, total lymphocyte count, and CD4+ and CD8+ T cell count at discharge. Clinical outcomes included in-hospital mortality rate and functional outcome as evaluated by the modified Rankin scale at 1-year post-discharge.

Results: The 3 groups were comparable with regard to demographics, stroke characteristics and baseline nutritional and immune function measures. At discharge, the prealbumin, transferrin, triceps skinfold thickness, total lymphocyte count, and CD4+ and CD8+ T cell count were comparable between the early enteral nutrition + probiotics group and the early enteral nutrition group, but were significantly higher than those of the parenteral nutrition group. The in-hospital mortality rates (6/37 vs 9/38 vs 5/37, P=0.49) and percentages of patients with modified Rankin scale > 2 were comparable (14/31 vs 11/29 vs 10/32, P=0.52) between the 3 groups at 1-year post-discharge.

Conclusions: Although early enteral nutrition in combination with probiotics could improve nutritional status for stroke patients, it did not seem to reduce in-hospital mortality rate and improve functional status at 1-year post-discharge.

Keywords: early enteral nutrition, probiotics, nutritional status, immune function, stroke

Biography

Tan Shiling, female, born on December 26, 1980, bachelor's degree, mainly engaged in rehabilitation and nursing work, has more than 20 years of clinical experience.

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