Abstract

Objective: Anastomotic leakage is one of the most important causes of morbidity and mortality in gastrointestinal surgery. We investigated the effect of oral glutamine on the healing of high-output intestinal fistula.

Setting: A tertiary university hospital of the University of Mato Grosso, Cuiaba, Brazil.

Patients and methods: 28 patients (25 males and 3 females; median age = 45 [18-71] years old) admitted with high-output post-operative small bowel fistulas (median volume in 24 h: 850 [600-2,200] mL) during a 4 years period were retrospectively studied.

Interventions: In the first two years 19 (67.9%) patients received only TPN as the initial nutritional support. In the last two years however, due to a change in the protocol for the nutritional support in cases of intestinal fistula 9 patients (32.1%) received oral glutamine (0.3 g/kg/day; 150 mL/day) in addition to TPN. Endpoints of the study were mortality, resolution of the fistula, and length of hospital stay (LOS).

Results: The overall mortality was 46.4% (13 patients). Fistula closure was observed in all other 15 patients (53.6%) that survived. In the subset of survivors LOS was similar in those who received or not received glutamine. The multivariate regression analysis showed that resolution of the fistula was 13 times greater in patients that received oral glutamine (OR = 13.2 [95% CI = 1.1-160.5]; p = 0.04) and 15 times greater in non-malnourished patients (OR = 15.4 [95% CI = 1.1-215.5]; p = 0.04).

Conclusions: We conclude that oral glutamine accelerated the healing and diminished the mortality in this series of patients with post-operative high-output intestinal fistula receiving TPN.

Keywords

Fistula, Glutamine, Anastomotic dehiscence, Small bowel, Parenteral nutrition, Malnutrition.