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Research letter

# Effectiveness of type formula on clinical and nutritional statues in ICU trauma patients in an Iranian population

To the Editor:

In critically ill patients, nutritional support plays a vital role in modulation of clinical status [1,2]. Enteral nutrition (EN) is essential in the management of the critically ill patient when oral food intake is inadequate or not possible [2,3]. Although the enteral feeding route is preferred for such patients (reduced costs of administration and reduced risk), there have been several reports of complications related to EN [4]. Hospital-prepared formula (HPF) and several commercial formulas have long been used in the clinical setting, and most critical care units in Iran use HPF [5]. HPF offers several advantages in terms of costs, availability, and ease of use, but there is no standard method for preparing these feedings. Furthermore, HPF may have low nutritional value and more contamination [6]. In an effort to increase nutritional value in HPF, we use a particular hospital-prepared formula in the teaching hospital of Kamyab in Mashhah (University of Medical Sciences), composed mainly of whey and malt dextrose and thus named whey formula (WF). The objective of this study was to compare the clinical outcome and nutritional statues in commercial formulas with WF used in the Mashad intensive care unit. In this study, 55 patients with head injury were admitted to the ICU. The patients selected so were not significantly different in age, sex, ideal body weight, and level of consciousness. One group of these patients (n = 15) provided the standard and the other group (n = 19) received WF via gavage. Caloric intake and caloric requirement assessments, as well as anthropometric, clinical, and laboratory data during the 7 d were examined, and a more comprehensive evaluation of MAC patients was done for 14 d. The results demonstrated that the control group patients received only 63% of their energy requirements, whereas the standard group received 100%. The calorie intake in the control group ($P = 0.045$) was significantly lower than that of the other group. Changes in arm circumference and biochemical markers in both groups did not differ significantly. Gastrointestinal symptoms were reported as follows: Diarrhea: four patents in the standard group (26%) and seven in the control group (36%); distention: 2 in the standard group (13%) and 3 controls (15%), residue rates: 7 in standard group (46%) and 6 (31%) in the control. In conclusion, the result of the present study indicates that WF is equally effective when compared with commercial formula for patients admitted to the ICU. These results suggest additional options for patients needing EN support.

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