



ABSTRACT

Nutritional therapy in a severely injured multiple traumas patients with hypovolemic shock, acute kidney injury, and hypoalbuminemia: A case report

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Background: Severely injured multiple trauma patients that undergoing surgery generally have a high risk of malnutrition. Surgery can cause a series of reactions including releases of stress hormone and inflammatory mediators that is called Systemic Inflammatory Response Syndrome. The syndrome causes hypermetabolism due to catabolism of glycogen, fat, and protein to enhance the recovery of healing and immune responses and maintain peripheral protein mass. Therefore, nutritional support is essential for the optimal recovery of these patients.

Methods: 19-years-old man with multiple traumas, hypovolemic shock, acute kidney injury, and hypoalbuminemia, underwent multiple surgeries and was being treated in ICU. His nutritional status was normal with initial body mass index (BMI) of 19.5kg/m². His kidney functions and wound healing showed no significant improvement since day-2. He began to have fever since day-4. He was already given intravenous albumin, parenteral nutrition, and two types of antibiotics. He was given additional vitamin A, B complex, and C. His diet was changed by increasing nutrition supplement for renal insufficiency and lowering protein intake.

Results: During 21 days of ICU, energy intake was 22-48 kcal/kg BW/day and protein intake was 0.8-1.3 g/kg BW/day. Vitamins began on day-7. Nutritional therapy changes since day-10. There was significant improvement in his kidney functions, fever, and wound healing on day-14. He was discharged from ICU on day-22.

Conclusion: Nutritional therapy may improve postoperative outcomes in a severely injured multiple traumas patient.

Keywords: nutritional therapy, severely injured, multiple traumas, hypovolemic shock, acute kidney injury, hypoalbuminemia

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