



ABSTRACT

The role of synbiotic to treat diarrhea in a critically ill Guillain-Barre syndrome patient with morbid and type 2 diabetes mellitus : A case report

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Background : Guillain-Barre Syndrome (GBS) is a serious post-infectious immune-mediated neuropathy, and the case is increasing every year, approximately 6 in 100.000 cases yearly. Several cases depend on mechanical ventilation (MV) and have diarrhea during treatment in the intensive care unit (ICU). This case report aims to describe the role of synbiotic supplementation in treating diarrhea in a GBS patient in intensive care unit (ICU).

Methods : We present a case report of a 50-years-old woman with GBS and breathing difficulty, being treated in ICU, depended on MV, and had diarrhea since day-15 on ICU. Her nutritional status was morbid obesity with initial body mass index (BMI) of 39.84 kg/m², she also had type 2 diabetes mellitus (T2DM) with uncontrolled blood glucose and dyslipidemia. Her diarrhea symptoms did not improve with anti-diarrhea drugs, antibiotic replacement, and administering non-lactose enteral nutrition formula. She was then given synbiotic supplementation consisting of *Bifidobacterium longum*, *Lactobacillus acidophilus*, and fructooligosaccharides (FOS) for 21 days.

Results : During 40 days of ICU care, energy intake was 13-30 kcal/kg BW/day and protein intake was 0.5-1.1 g/kg BW/day. Synbiotic supplementation began on day-21 of ICU care. There were significant improvements in diarrhea symptoms and clinical condition on day-28 of ICU care. She was discharged from ICU on day-41.

Conclusion : Provision of synbiotic supplementation may improve diarrhea symptoms in a critically ill GBS patient with morbid obesity and T2DM.

Keywords: synbiotic, Guillain-Barre syndrome, critically ill, diarrhea

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