

Case Study: Enteral Nutrition in Stroke Patients with Nasogastric Tube at Undata Hospital

Julio Alvero Pamolango^{1*}, Sri Rezeki Pettalolo², Selly Toding², Nurdiana¹,
Adillah Imansari¹, Anissa Anggraini¹

¹Department of Nutrition, University of Widya Nusantara, Palu 94119, Indonesia

²Department of Nutrition, Undata Hospital of Central Sulawesi Province, Palu 94111, Indonesia

ABSTRACT

The aim of this study was to determine the adequacy of commercial enteral nutrition for nutrition needs of stroke patients with Nasogastric Tube (NGT) installation at Undata Hospital. The research was a case study of one stroke patient with NGT. The patient's nutrient intake for three days was measured for energy requirement (87.6%), carbohydrates (76.7%), protein (83.76%), and fat (122.98%). The patient was given commercial food Blendera-MF and Virgin Coconut Oil (VCO) in moderation without incidence of vomiting. Therefore, giving enteral feeding (Blendera-MF) to patients fulfills their nutritional needs.

Keywords: blendera-MF, dysphagia, virgin coconut oil

INTRODUCTION

Stroke is a cardiovascular disease that causes high mortality and morbidity worldwide. In Indonesia, as many as 10.9% of people had a stroke, according to data from the 2018 Basic Health Research, which is an increase of 7% compared to 2013 (MoH RI 2019).

One of the complications of stroke is dysphagia, which can lead to malnutrition. Therefore, efforts are needed to address this problem with enteral nutrition from commercial products such as Blendera-MF and hospital formulations to improve the nutritional status of the patient and support the healing process (Hagnyonowati & Arifah 2016). The purpose of this case study was to determine the adequacy of commercial enteral nutrition (Blendera-MF) in meeting the nutritional needs of stroke patients with Nasogastric Tubes (NGT) at Undata Hospital.

METHODS

This research was a case study held in the Orchid Room, Undata Hospital, Central Sulawesi Province in December 2022. The subject of this research was a patient with a Nasogastric Tube (NGT) feeding condition due to dysphagia caused by stroke. Patients were given food in

the form of Blendera-MF (nutrient composition of 31.2 g of carbohydrates, 7.5 g of fat, 9.25 g of protein, and 227.5 kcal energy in 50 g) and VCO (nutrient composition 50 kcal and 5 g of fat in 5 mL). The patient was fed with Blendera-MF and VCO 3 times a day. The patient's food intake was measured using the 24-h food recall for three days with the help of a food photo book. Food intake adequacy was categorized based on the Ministry Health of the Republic of Indonesia in 1996 with five levels of deficiency: severe deficiency (<60% of requirement), moderate deficiency (61–69% of requirement), mild deficiency (70–79% of requirement), sufficient (80–119% from requirement), excess (>120% of requirement) (MoH RI 1996).

RESULTS AND DISCUSSION

A 67 year-old female patient with a history of breast cancer and surgery in 2021 was admitted to the hospital on October 10, 2022. The patient had received standard nutritional care process for one week, then was reassessed.

The patient was provided with enteral nutrition given in the form of commercial food under the brand Blendera-MF (nutrient composition of 31.2 g of carbohydrates, 7.5 g of fat, 9.25 g of protein, and 227.5 kcal energy in 50 g) supplemented with coconut oil under the

*Corresponding Author: tel: +6282148583897, email: 201904047@stikeswnpalu.ac.id

(Received 05-06-2023; Revised 28-07-2023; Accepted 02-09-2023; Published 30-12-2023)

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License

brand Virgin Coconut Oil (VCO). The patient's food intake data for three days, obtained by food recall, are shown in Figure 1.

The analysis of intake of nutrients (energy, carbohydrate, fat and protein) performed on the patient showed that the patient's fat intake was the highest compared to the intake of other nutrients because the patient consumed Virgin Coconut Oil (VCO). The lowest nutrient intake for three days was carbohydrate intake because the patient's diet was based only on liquid foods. In addition, the patient's nutrient intake for three days was measured for energy requirement (87.6%), carbohydrates (76.7%), protein (83.76%), and fat (122.98%) because the patient was given commercial food (Blendera-MF) and VCO.

Commercial enteral nutrition, when given to patients on a stage-by-stage basis, may help to accelerate the recovery process. Apart from providing food, nutritional management in the form of nutritional counseling and collaboration with other health workers can also help patients in their recovery (Hagnyonowati & Arifah 2016).

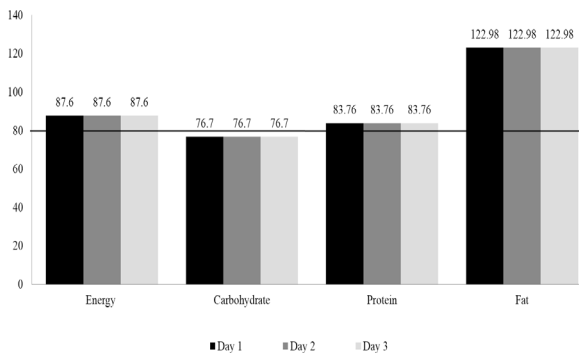


Figure 1. Three-days nutrient intake of a stroke patient fed with commercial enteral nutrition formula and VCO in Palu

CONCLUSION

Enteral nutrition in the form of commercial product (Blendera-MF) for stroke patients with NGT shows promising results in terms of nutritional adequacy of patients and it is expected to help patients recover faster.

ACKNOWLEDGEMENTS

The authors would like to thank Undata Hospital, Central Sulawesi Province for allowing this study to be conducted there. Acknowledgements are also given to Widya Nusantara University.

DECLARATION OF CONFLICT OF INTERESTS

The author has no conflict of interest to declare.

REFERENCES

- Hagnyonowati, Arifah MR. 2016. Nutritional Management of Stroke Patients with Dysphagia. *J Medi Hosp* 3(3):204–206. <https://dx.doi.org/10.36408/mhjcm.v3i3.236>
- [MoH RI] Ministry of Health Republic of Indonesia. 1996. *Pedoman Praktis Pemantauan Gizi Orang Dewasa*. Jakarta (ID): MoH RI.
- [MoH RI] Ministry of Health Republic of Indonesia. 2019. Hasil utama riskesdas 2018. https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-riskesdas-2018_1274.pdf [Accessed 25th May 2023].