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Effect of ketogenic diet versus low-calorie diet on reducing HbA1C level in patients with type-2 diabetes mellitus: An evidence-based case report

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Background: According to International Diabetes Foundation (IDF), there were 9.1 million people in Indonesia have type-2 diabetes in 2014, the fifth biggest in the world. In addition, since diabetes is a multifactorial disease, the treatment needs to be holistic and comprehensive to control the progressiveness of the disease. One of the treatment pillars is controlled diet as diabetic people have hyperglycemia. This raises a question whether ketogenic diet, that only includes low number of carbohydrate which responsible for blood sugar level is superior to conventional low-calorie diet to control blood sugar monitored by HbA1c level.

Objective: To compare the effect of ketogenic diet and low-calorie diet in reducing HbA1c among people with type-2 diabetes with overweight to obese weight.

Method: PubMed and Cochrane were used for literature browsing. Articles were then selected based on inclusion and exclusion criteria. Selected articles were assessed with Oxford CEBM critical appraisal tools.

Result: One quasi-experiment study and one randomized controlled trial were obtained. Both studies are applicable with similar validity and show p-values: <0.0001 and <0.03, respectively in reduction of HbA1c in ketogenic diet group.

Conclusion: Ketogenic diet can be applied as an alternative of conventional diet to reduce HbA1c level faster in type-2 diabetes patients with overweight to obese weight.

Biography

Muhamad Shafiq Advani has graduated from Medical School in 2017 from University of Indonesia. He has also completed his Master's degree in Medical Research in Stem Cells and Regenerative Medicine in 2015 from Newcastle University. He is currently a General Practitioner Intern.

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