ABSTRAK

Latar Belakang: Diabetes mellitus (DM) merupakan penyakit metabolik yang ditandai dengan peningkatan kadar gula darah akibat gangguan pada sekresi insulin, kerja insulin atau keduanya. Penderita DM pada tahun 2014 sebesar 8,3% dari keseluruhan penduduk di dunia dan mengalami peningkatan setiap tahunnya. Buah naga dikenal sebagai buah yang kaya manfaat yang mengandung flavonoid, serat, dan vitamin C yang dapat menurunkan kadar glukosa darah dan kolesterol. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian jus buah naga merah dengan dosis 2.86 g/kg BB/hari terhadap kadar glukosa darah puasa (GDP) dan kolesterol total penderida diabetes mellitus tipe 2 dengan dislipidemia.

Metode: Jenis penelitian adalah kuasi eksperimental dengan rancangan *pre-post control group design*. Subyek adalah penderida diabetes mellitus tipe 2 dengan dislipidemia, dibagi menjadi 2 kelompok, yaitu kelompok kontrol dan kelompok perlakuan yang diberi jus buah naga merah dengan dosis 2.86 g/kg BB/hari. Intervensi dilakukan selama 21 hari. Pengukuran kadar GDP dan kolesterol total dilakukan dengan pengambilan darah pasien yang kemudian diujikan di laboratorium. Darah diambil sehari sebelum intervensi dan pada hari ke-22 setelah subyek berpuasa selama 8 jam. Uji normalitas menggunakan *Shapiro-Wilk*. Analisa statistik menggunakan *Wilcoxon Signed Rank Test* dan *Mann-Whitney.*

Hasil: Kelompok perlakuan kadar GDP mengalami penurunan yang bermakna sebesar 178,4 $\pm$ 61,647 mg/dl, kemudian setelah diberikan intervensi rata-rata kadar glukosa darah sebesar 137 $\pm$ 46,123 mg/dl. Kelompok perlakuan kadar kolesterol total mengalami penurunan yang bermakna sebesar 255,27 $\pm$ 40,761 mg/dl, kemudian setelah diberikan intervensi rata-rata kadar kolesterol total sebesar 213,87 $\pm$ 28,145 mg/dl. Secara statistik terdapat perbedaan perubahan kadar GDP dan kadar kolesterol total antara kelompok kontrol dan perlakuan yang bermakna ($p<0.005$).

Kesimpulan: Pemberian jus buah naga merah berpengaruh terhadap penurunan kadar glukosa darah dan kolesterol total penderida diabetes mellitus tipe 2 dengan dislipidemia.

Kata kunci : Jus buah naga merah, glukosa darah, kolesterol total, diabetes mellitus tipe 2 dengan dislipidemia.

ABSTRACT

Background: Diabetes mellitus (DM) is a metabolic disease characterized by an increase in blood sugar levels due to interference with insulin secretion, insulin action or both. DM patients in 2014 amounted to 8.3% of the total population in the world and experienced an increase every year. Dragon fruit is known as a fruit that is rich in benefits that contain flavonoids, fiber, and vitamin C which can reduce blood glucose levels and cholesterol.

This study aimed to determine the effect of giving red dragon fruit juice at a dose of 2.86 g / kg / day to fasting blood glucose levels (GDP) and type 2 diabetes mellitus with total dysentery cholesterol with dyslipidemia.

Method: This type of research is quasi-experimental with a pre-post control group design.

The subjects were type 2 diabetes mellitus sufferers with dyslipidemia, divided into 2 groups, namely the control group and the treatment group who were given red dragon fruit juice at a dose of 2.86 g / kg / day. The intervention was carried out for 21 days. Measuring GDP and total cholesterol is done by taking patients' blood which is then tested in the laboratory. Blood was taken a day before the intervention and on the 22nd day after the subjects fasted for 8 hours. Normality test using Shapiro-Wilk. Statistical analysis uses the Wilcoxon Signed Rank Test and Mann-Whitney.

Result: The treatment group GDP level decreased significantly by 178.4 + 61,647 mg / dl, then after being given the intervention the average blood glucose level was 137 + 46,123 mg / dl. The treatment group total cholesterol level decreased significantly by 255.27 + 40.761 mg / dl, then after being given an intervention the average total cholesterol level was 213.87 + 28.145 mg / dl. Statistically there were significant differences in GDP levels and total cholesterol levels between the control and treatment groups ($p < 0.005$).

Conclusion: The administration of red dragon fruit juice has an effect on decreasing blood glucose levels and total cholesterol of type 2 diabetes mellitus with dyslipidemia.

Keywords : Red dragon fruit juice, blood glucose, total cholesterol, type 2 diabetes mellitus with dyslipidemia.