ABSTRACT

Background: Type 2 diabetes mellitus (T2DM) is a common chronic disease in Nigeria. The Routine Care usually given to the patients does not result in good glycaemic control in a majority of them. Better glycaemic control had been observed in patients who received Patient-Centred Care (PCC) in some studies.

Objective: The objective was to compare Patient-Centred-Care (PCC) intervention addressing nutrition and exercise with Routine Care in terms of glycaemic control and quality of life (QOL) of patients with T2DM in the General Out Patients Department (GOPD) of the Jos University Teaching Hospital (JUTH).

Design: A total of 74 adults with type 2 diabetes mellitus with a mean age of 49.9 years were randomly assigned to the intervention group or the control group. All participants received basic diabetes education. The subjects in the intervention group participated in a weekly nutrition and exercise classes (60 minutes each session). Subjects for whom it was deemed safe, apart from individual daily walking exercises, also participated in a weekly training program conducted on a diamond back cycle ergometer starting with the heart rate associated with 55% of their initial maximum volume of oxygen (VO$_{2\text{max}}$) for 30min/day and gradually increasing to the heart rate associated with 75% of their initial VO$_{2\text{max}}$ for 50min/day at the end of week 12. They maintained this intensity and duration throughout the remaining period of the trial. Glycated haemoglobin, fasting blood glucose, height, weight, body mass index (BMI), and blood pressure were measured at baseline and the end of the study (after 12 weeks).

Results: The intervention group lost 3±15.8kg compared with a weight gain in the control group of 0.4±13.2kg ($P<0.05$). Fasting blood glucose decreased 116±32.86mg/dL in the intervention group and increased 38.0±35.3mg/dL in the control group ($P=0.000$). Glycated haemoglobin decreased 2.8±1.7% in the intervention group and increased 1±1.6% in the control group ($P=0.000$). The quality of life scores improved in the intervention group compared to the control group (p<0.05).

Conclusions: Glycaemic control and quality of life of type 2 diabetes mellitus patients can be improved through Patient-Centred-Care intervention addressing nutrition and exercise.