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Probiotic effect of kefir on glycated hemoglobin HbA1c in diabetic patients

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The test of hemoglobin HbA1c is a considerable tool in the management of diabetic patients. It is thus considered that the HbA1c concentration is the history of the glycemia for 120 days prior blood test. This assay also demonstrates the risks of long-term complications. Kefir is a probiotic mixture that originated in the Caucasus Mountains of Russia and that has been proven beneficial in the treatment of many diseases including diabetes. Therefore, we studied the therapeutic effect of kefir on 30 diabetic cases (15 women and 15 men). Our study was focused on the consumption of this product by diabetics for one month and its effect on glycated hemoglobin was then assayed. The results obtained show that Kefir acts on the rate of hemoglobin HbA1c in diabetic during and after taking a drink of fermented milk (kefir). The value of the Glycated hemoglobin during the first two weeks has recorded a net decrease and then it stabilized up to 5%, which corresponds to 1g in standards, especially among female subjects. However, the decrease in men was less relevant. These values vary according to the conservation conditions, pH, and duration of consumption of kefir.

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Cut-off value of serum glucose in 1 hour-50 grams glucose challenge test for screening of gestational diabetes in a Bangladeshi population

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Background: Poor compliance to standard Oral Glucose Tolerance Test (OGTT) with 75g more glucose load is well a known problem in conducting screening programs for Gestational Diabetes mellitus (GDM). It has been reported that a 1 hr 50 g glucose challenge test (GCT) is a more acceptable and feasible alternative; however, the cut-off levels of post-challenge serum glucose in GCT have been reported to vary in different populations.

Aims: An attempt was made in the present study to define the cut-off levels of serum glucose during GCT, which shows best conformity to the more confirmatory OGTT as per WHO Guidelines.

Methods: A total of 224 Bangladeshi women who underwent a GCT were prospectively investigated. GCT was performed between 24 to 28 weeks of gestation. Each subject received a 50 grams oral glucose load without regard to the fasting or fed state, followed by determination of 1 hour venous plasma glucose level. Women demonstrating GCT exceeding 130 mg/dl (>7.2mmol/l) received a 75 grams, 2 hour oral glucose tolerance test to determine whether or not they had GDM.

Results: Twenty three (10.3%) women were diagnosed to have GDM. The receiver-operator characteristics curve identified a GCT finding above 174 mg/dl as the cut-off value for detecting GDM, which showed sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of 35%, 90%, 80% and 68% respectively.

Conclusion: Based on PPV and NPV, our data suggest that 1 hour-50 grams GCT is a feasible and acceptable screening test and a cut-off value of 174 mg/dl, as the post-challenge serum glucose, may be appropriate for screening GDM in Bangladeshi population by this test.

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