

8th Euro Global

Diabetes Summit and Medicare Expo

November 03-05, 2015 Valencia, Spain

Adenosine deaminase activity in diabetes mellitus

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Background: Diabetes mellitus is a group of metabolic disorders of carbohydrate metabolism in which glucose is underused, producing hyperglycemia. It is a major worldwide health problem leading to increased mortality and serious morbidity. Adenosine deaminase (ADA) is a polymorphic enzyme that catalyses the irreversible deamination of adenosine to inosine. ADA is considered as a good marker of the cell mediated immunity and it has been an established screening test for tuberculosis. Literature suggests that the serum ADA activity is significantly raised in patients with type 2 DM. Diabetic patients are prone to opportunistic infection, thus serum ADA levels in these patients is very important as a screening test for tuberculosis and autoimmune diseases.

Objective: To correlate the serum ADA level with *HbA1c*, fasting and postprandial blood glucose level in patients with diabetes mellitus.

Material & Methods: This is a hospital based cross-sectional study done in B. P. Koirala Institute of Health Sciences. 150 diagnosed patients (72 males and 78 females) with DM were enrolled in the study from April 2014 to August 2014. Fasting, postprandial and *HbA1c* blood sample was analysed in cobas c311. Serum ADA was done by Giusti method. Data were analysed using SPSS version 20, p value<0.05 was considered significant.

Results: Mean age group in the study was 56±11.95. Mean value of *HbA1c*, fasting and postprandial blood glucose and serum ADA level was 6.54±2.49; 153.45±94.40, 239.56±139.38 and 41.30±19.99 respectively. Serum ADA level was significantly correlated with *HbA1c* levels ($r=0.426$, $p=0.0001$), fasting blood glucose ($r=0.297$, $p=0.0001$) and postprandial blood glucose ($r=0.278$, $p\text{ value}=0.001$).

Conclusion: There is a significant increase in serum ADA activity in DM with increase in *HbA1c* levels which may play an important role in predicting the glycemic status in these patients.

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Psycho-social effect of religion and culture on diabetes prevention and care in an urban setting in south-western Nigeria

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It is a unique study as it aims to relate the psychosocial effects of religion & culture with the awareness, knowledge and attitude of Nigerians regarding diabetes prevention and care in an urban setting in south-west Nigeria. Our study population included a higher proportion of female respondents (65%), with the majority between 19 and 29 years old (56%). The majority were unemployed (67%) or in the teaching profession (24%). Over half (58%) of our respondents were Christian (C); while 41% were Muslim (M), and 1% were Traditional worshippers (TW). At least 25% of Nigerians believed that diabetes was due to witchcraft or a punishment from God. Specifically, 28% of respondents believed that diabetes was caused by an infection; this belief was more prevalent among Muslims compared to other religions (C vs. M vs. T: 33% vs. 66% vs. 1%). Also, 16% and 10% of respondents believed diabetes could be caused by witchcraft or by god, respectively; these beliefs were more prevalent among Christians compared to others (C vs. M vs. T: 84% vs. 14% vs. 2% and 63% vs. 34% vs. 3%, respectively). ($P<0.0001$). Nearly all (90%) of respondents believed that diabetes can kill; this belief was more prevalent among Christians compared to others (C vs. M vs. T: 60% vs. 39% vs. 1%) ($P<0.0001$). From our study we conclude that many respondents have inadequate knowledge about the causes of diabetes & its complications. Future studies should attempt to improve knowledge about diabetes.

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