

## 2<sup>nd</sup> International Conference on **Endocrinology**

October 20-22, 2014 DoubleTree by Hilton Hotel Chicago-North Shore, USA

### Comparison of mean serum 25–hydroxycalciferol levels in adults with prediabetes and normoglycaemia

Dilshad Ahmed Khan, Qurat-ul-ain, Aamir Ejaz, Farooq Ahmad Khan  
University of Health Science, Pakistan

Vitamin D deficiency appears to be much worst in South Asian countries including Pakistan where its prevalence is 30 – 90%. Diabetes mellitus type 2 (T2DM) has high prevalence in Pakistan ranging from 7-9%. Low 25(OH)D is known to perturb functions of endocrine pancreas and may lead to T2DM. Role of vit D in glucose metabolism includes facilitation of insulin secretion through presence of specific vit D receptor (VDR), on pancreatic  $\beta$  cells, immune modulation by inhibition of IL 6 and TNF  $\alpha$  and increased expression of insulin receptors. VDR gene polymorphisms and vit D interactions with the insulin like growth factor system may further influence glucose homeostasis. Aim of our study was to compare mean serum 25(OH)D levels in adults with prediabetes and normoglycaemia. In this case control study a total number of 272 adults of either gender aged 20 years and above, including 136 prediabetics and 136 normoglycaemics were consecutively inducted as cases and controls respectively. Fasting plasma glucose (FPG) was measured on Modular p800 Roche chemistry analyzer with hexokinase methodology & serum 25(OH)D test was performed on Cobas e411 analyzer using the electrochemiluminescence technique. Mean 25(OH)D levels in pre-diabetic and normoglycaemic groups were statistically compared with the use of independent sample “t” test. Odds ratio was also calculated for vit D deficiency. p value < 0.05 was considered statistically significant. The results showed mean serum 25(OH)D 27.24 nmol/L in pre-diabetics and 36 nmol/L in normoglycaemics (p<0.001). 120 individual with prediabetes while 105 of normoglycaemics showed vit D deficiency (OR: 2.214). In conclusion, there was significant difference between mean serum 25(OH)D levels of prediabetic and normoglycaemic Pakistani adults. This revealed that there is an association between low plasma 25(OH)D and prediabetes which requires vit D estimation replacement therapy for prevention.

#### Biography

Dilshad Ahmed Khan is head of chem pathology & endocrinology department in AFIP Rawalpindi, Pakistan. He qualified MBBS from A M College in 1981, MCPS in 1985 and FCPS in 1992 from College of Physicians and Surgeons, Pakistan. He was awarded PhD in 2001 from Quaid-i-Azam University Islamabad- Pakistan. He is actively involved in academic and research activities of undergraduate and postgraduate courses. During his research career, he has published over 100 national and internationally refereed journal articles and presented 75 papers in International/ national conferences. He is editor of Pakistan Journal of Pathology. In recognition of his service to scientific research in the field of medicine, He has been conferred research awards from Pakistan Academy of Medical Sciences, American Association for Clinical Chemistry and Pakistan Academy of Sciences.

[dilshad56@yahoo.com](mailto:dilshad56@yahoo.com)