

7th Indo Global Diabetes Summit and Medicare Expo

November 23-25, 2015 Bengaluru, India

Prevalence of pre-diabetes (impaired fasting glucose and/ or impaired glucose tolerance) among urban slum dwellers

Sadiya Sultana

Dr. NTR University of Health and Sciences, India

According to diabetes atlas 2009 India has 51 million people with diabetes. However, there has been no nationwide survey of diabetes in India except for ICMR-INDIAB study which was initiated in phase manner (2009). Unfortunately more than 50% of the diabetic subjects in India remain unaware of their diabetic status, which adds to the disease burden. This underscores the need for mass awareness and screening programs to identify and overcome the burden due to diabetes in India. The Government of India has already initiated a national Diabetes Control Program. For such programs to be successful, it is necessary to determine cost effective methods for identifying undiagnosed Diabetic subjects in our country. The objective of this study was to screen and identify individuals with Impaired Glucose Tolerance (IGT) and/or Impaired Fasting Glucose (IFG) and thus estimate the burden of pre-diabetes in the selected region. According to this study the prevalence of pre diabetes was found to be 3.5%. The present study must be multi-centric to get the exact results of pre diabetes. More studies have to be done to evaluate the risk factors. For the same purpose, the period of study also has to be long (cohort study).

sadiyasultana10@gmail.com

Association of exposure to radio-frequency electromagnetic field radiation (RF-EMFR) generated by mobile phone base stations with glycated hemoglobin (HbA1c) and type 2 diabetes mellitus

Sultan Ayoub Meo , Yazeed Alsubaie , Zaid Almubarak , Hisham Almutawa , Yazeed Al Qasem and Rana Muhammed Hasanato

King Saud University, Saudi Arabia

Installation of mobile phone base stations in residential areas has initiated public debate about possible adverse effects on human health. This study aimed to determine the association of exposure to Radio Frequency Electromagnetic Field Radiation (RF-EMFR) generated by Mobile Phone Base Stations with glycated hemoglobin (HbA1c) and occurrence of type 2 diabetes mellitus. For this study, two different elementary schools (school 1 and school 2) were selected. We recruited 159 students in total; 96 male students from school 1, with age range 12-16 years and 63 male students with age range 12-17 years from school 2. Mobile phone base stations with towers existed about 200 meters away from the school buildings. RF-EMFR was measured inside both schools. In school 1, RF-EMFR was 9.601 nW/cm² at frequency of 925 MHz and students had been exposed to RF-EMFR for a duration of 6 hours daily, 5 days in a week. In school 2, RF-EMFR was 1.909 nW/cm² at frequency of 925 MHz and students had been exposed for 6 hours daily, 5 days in a week. 5-6 ml blood was collected from all the students and HbA1c was measured. The mean HbA1c for the students who were exposed to high RF-EMFR was significantly higher (5.44±0.22) than the mean HbA1c for the students who were exposed to low RF-EMFR (5.32±0.34) (p=0.007). Moreover, students who were exposed to high RF-EMFR generated by MPBS had a significantly higher occurrence of type 2 diabetes mellitus [P=0.0001] relative to their counterparts who were exposed to low RF-EMFR. It is concluded that exposure to high RF-EMFR generated by MPBS increase HbA1c and occurrence of type 2 diabetes mellitus among school aged adolescents.

yazeed.alq@gmail.com

Notes: