ABSTRACT

Relationship between fasting blood glucose and body mass index among students of a medical college

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Background
Obesity is one of the most important modifiable risk factors in the pathogenesis of lifestyle diseases like atherosclerosis, hypertension and type 2 diabetes mellitus. Overweight or obese adolescents are at an increased risk of developing diabetes and hypertension in future. A study was done to determine the relationship between body mass index and fasting blood glucose among students of a tertiary care teaching hospital.

Materials and methods
A cross sectional analytical study was carried out among all medical students in a tertiary care teaching hospital in Kerala who consented to participate after obtaining approval from Institutional Research and Ethics Committee. The study tools used were standardized weighing machine, stadiometer, Accu-check glucometer and strips, disposable needles and pre-designed questionnaire.

Results
Among the 254 study participants, 67% were females. The prevalence of impaired fasting glucose is 18.11% in the study population. No significant correlation was found between fasting blood glucose and body mass index. There was an increase in median FBS as the BMI increases, though not statistically significant ($p=0.08$). In the linear regression model, the statistic R^2 explains that 7.9% of the variability in fasting blood glucose is explained by body mass index.

Conclusion
The prevalence of prediabetes among the study participants was very high and it was higher among those who were overweight. The need of the hour is to identify the high-risk group in the community right from the young age and initiate trials or intervention studies to prevent or delay the onset of diabetes.

Key words
Body mass index, correlation, fasting blood glucose, medical students