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Prevalence of type 2 diabetes in the patients of J.P.N. apex trauma center AIIMS New Delhi

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Abstract
Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disease that affects the body's ability to turn food into energy. Normally, after eating, sugar in the form of glucose from the food enters the bloodstream. The hormone Insulin, released from the pancreas in response to the rising levels of glucose in the bloodstream, is responsible for transporting the glucose into the body's cells, to be used as fuel. In Type 2 Diabetes, the body does not respond well to insulin. As a result, the cells cannot absorb the glucose properly and it remains and builds up in the bloodstream and damages the inner lining of the small blood vessels. Uncontrolled diabetes may lead to blindness, limb amputation, kidney failure, and nerve damage. Diabetes is also a prominent factor in accelerating the hardening and narrowing of the arteries (atherosclerosis), leading to stroke, heart disease, and other small blood vessel disorders. The objective of this study was to investigate the "Prevalence of type 2 diabetes patience of J.P.N. Apex Trauma Center (JPNATC) AIIMS New Delhi". This study has been carried out in different parameters age groups, educational status, and socio-economic status. Therefore a cross-sectional survey was conducted among age group (18-72 years) in various wards of J.P.N Apex Trauma center viz. TC-1, TC-4, TC-5, TC-6 and TC-7. The survey revealed 90 males and 26 females. The study showed the prevalence was highest TC-7 and lowest in TC-1. This study also showed that the prevalence of type 2 diabetes mellitus more in urban area compare to rural area(J.P.N.A AIIMS).

Keywords: J.P.N. Apex Trauma Center, type 2 diabetes, urban patient

1. Introduction

Diabetes mellitus is a group of metabolic disease characterized by hyperglycemic reaction, or both. Chronic diabetes is associated with long term damage, dysfunction of various organ, especially the eyes, kidneys, nerves, heart and blood vessels. Its pathogenesis appears to involve complex interaction between genetic and environmental factors (Gupta et al. 2008). T2 DM occurs when impaired insulin effectiveness (insulin resistance) is accompanied by the failure to produce sufficient-cell insulin (Permutt et al. 2005). The prevalence of diabetes has been well documented in a battery of recent papers (Shaw et al 2010). Type 2 diabetes was viewed as a disease of overfed, sedentary people of European ancestry. But it is now exploding around the world owing to the spread of Western habits. In India, a wide range of outcomes for different groups is buried within the average diabetes prevalence of 8% (Mohan et al. 2008b).

Prevalence is only 0.7% for non-obese, physically active, rural Indians. It reaches 11% for obese, sedentary, urban Indians; and it peaks at 20% in the Ernakulam district of Kerala, one of India's most urbanized states. Among lifestyle factors predicting the incidence of diabetes in India, some are familiar from the West; whereas others turn expectations upside down (Mohan et al. 2008a). In India, as in the West, diabetes is ultimately due to chronically high levels of blood glucose, and some of the clinical consequences are similar. The age of onset in India has been shifting towards every younger people even within the past decade among Indians in their late teens, 'adult-onset' diabetes already manifests itself more often than does 'juvenile onset' diabetes. Diabetes mellitus (DM) refers to a group of common

metabolic disorders that share the phenotype of hyperglycemia. Depending on the etiology of the DM, factors contributing to hyperglycemia include reduced insulin secretion, decreased glucose utilization, and increased glucose production (Power et al. 2008). There are an estimated 40 million persons with diabetes in India in 2007 and this number is predicted to rise to almost 70 million people by 2025 by which time every fifth diabetic subject in the world would be an Indian (Sicree et al. 2006).

Objectives

The objective of the study was to find out the prevalence of diabetes in the patience J.P.N. Apex Trauma Center AIIMS New Delhi, present study also finds out the diabetes in different age groups, educational status.

Methods

Cross-sectional survey was conducted among age group (18-72 years) in various wards of J.P.N Apex Trauma center viz. TC-1, TC-4, TC-5, TC-6 and TC-7.The survey revealed 90 males and 26 females. Basic data regarding awareness, knowledge, traditional beliefs, treatment practices and other issues were included in the questionnaire

Results

The survey revealed with type 2 diabetes in the patience of J.P.N. Apex Trauma Center. This study was carried out in a period of 04 months (2014). Data was studied at JPNA Trauma Centre AIIMS New Delhi. The prevalence was highest TC-7 i.e. 14.00% due to sedentary and urban life style and lowest in TC-1 i.e. 08.00% due to moderate and rural life style. Present study also finds out the diabetes in different age groups, educational status.

Prevalence of Diabetes in different wards:

Prevalence of Diabetes in various wards in JPNATC		
S. No.	**Ward No.**	**Prevalence of Diabetes in %**
1	TC 1	8.00
2	TC 4	12.1
3	TC 5	13.8
4	TC 6	13.00
5	TC 7	14.00

Conclusions

The numbers of the individuals with diabetes living in the define age group was identified and this was used to estimate the prevalence of diabetes mellitus. There are several possible regions for the high prevalence of diabetes and metabolic syndrome among urban middle class patience of Trauma center. Life style modification abdominal obesity, less education background, change in diet pattern, high intake of junk food and lack of nutritional knowledge are the likely contributing factor of diabetes mellitus. This study suggests that diabetes prevention program to be successful would require prevention policies and healthy lifestyle modification regarding diabetes**.**

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