A Comparative Study of Anthropometry and Risk Factors among Diabetics and Non-Diabetics in Puducherry

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Background

Diabetes has emerged as a major healthcare problem in India. According to Diabetes Atlas published by the international diabetes federation (IDF) there were an estimated 40 million persons with diabetes in India in 2007 and this number is predicted to rise to almost 70million people by 2025. Diabetes Mellitus is multifactorial disease main risk factors include modifiable variables like Body Mass Index (BMI), physical inactivity, diet, infections and non–modifiable variables like age, family history of Diabetes Mellitus.

Aims & Objectives

To assess Body Mass Index (BMI), Waist Hip Circumference (WHR) and Waist Circumference (WC) of known diabetics and also to compare the known risk factors of diabetes between diabetics and non-diabetics.

Material & Methods

Thirty diabetic patients and thirty non-diabetic healthy persons were randomly selected from the Villiyanur commune Panchayat of Pondicherry aged 35-70 years in the service area of Sri Lakshmi Narayana Institute of Medical Sciences (SLIMS) in June 2013 .They were subjected to anthropometric analysis in the form of Body Mass Index (BMI) ,Waist and Hip ratio. The diabetic subjects were already "known diabetic patients" registered for follow up in SLIMS Medical College Hospital. Age and gender matched neighborhood controls were selected for each known diabetics. Selection of variable: Height, Weight, BMI, WC and WHR were measured following the standard procedures. Anthropometric measurements were taken with subjects in light clothing and without shoes. Height and weight were measured using calibrated stadiometer and portable weighing machine respectively. The height and weight were recorded to the nearest centimeters and kilograms, respectively. BMI was calculated by dividing weight (kg) by square of height (m2). Data was analyzed by SPSS Version 16 using student 't' test for comparing the anthropometric variables.

Results

No statistically significant difference was observed with respect to BMI. However there was a statistically significant ($p<0.05$) when the Waist Hip ratio was compared.

Conclusions

On calculating the Body Mass Index (BMI) and Waist and Hip Ratio (WHR) in Thirty known Diabetic patients where the variants of Waist and Hip Ratio are increased. . This further strengthens the evidence that Waist Hip ratio as a better indicator/ predictor of diabetes.