

Association of Obesity Indices with Type 2 Diabetes Mellitus and Coronary Artery Disease

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KEYWORDS Type 2 Diabetes. Coronary Artery Disease. Obesity. Percent Body Fat

ABSTRACT India is the diabetes capital of the world. Asian Indians have an increased predilection not only to diabetes but also to coronary artery disease (CAD). Obesity is an independent risk factor for the development of diabetes and CAD. Body mass index (BMI), waist/hip ratio (WHR), waist circumference (WC) and percent body fat (%BF) are the various variables used to measure obesity. The present study was attempted to clarify whether these obesity measures are associated with CAD in diabetic patients of Amritsar (Punjab). This study included 190 subjects divided into four groups: 47 patients with type 2 diabetes and CAD, 50 patients having only type 2 diabetes (without CAD), 46 CAD patients (without diabetes) and 47 healthy age and sex-matched controls. Student's t-test was used to compare the means of various variables and Pearson's correlation coefficient of all the variables with CAD was calculated. Significant difference was observed for BMI, WHR, WC and % BF between non-diabetic CAD patients and controls. On the other hand, only % BF showed significant difference when diabetic patients with and without CAD were compared. BMI, WHR, WC and % BF showed significant correlation with CAD in non-diabetic subjects. However, only % BF showed a significant correlation with CAD in diabetic patients. Therefore, % BF can be used as a CAD marker in diabetic as well as non-diabetic subjects. BMI, WHR and WC can act as indicators of CAD in the non-diabetic population but not in the diabetic subjects. Larger prospective studies are needed to confirm these findings.