

Risk Factors for Cardiovascular Functioning in People with Diabetes and Obesity

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DESCRIPTION

The prevalence of diabetes mellitus is sharply increasing worldwide. 230 million people worldwide suffer with diabetes, with two thirds of them living in developing nations. Over 80% of the 366 million people with diabetes worldwide by 2030 will live in developing nations. Nonetheless, medical admissions and patient attendance rates are increasing at large hospitals.

The majority of deaths in patients with diabetes are caused by cardiovascular disorders, such as peripheral vascular diseases, coronary heart disease, and stroke. Cardio Vascular Diseases (CVD) are known to be exacerbated by diabetes mellitus, hypertension, obesity, cigarette smoking, dyslipidemia, and physical inactivity. These cardiovascular risk factors are referred to as classic or conventional risk factors. Patients with diabetes are more affected by the traditional cardiovascular risk factors than individuals without diabetes. According to the Multiple Risk Factors Intervention study (MRFIT), men with diabetes had a higher chance of dying from CVD than men without diabetes when any one, two, or all three risk factors includes hypertension, cigarette smoking, and dyslipidemia were present.

Patients with diabetes especially type 2 diabetics, frequently have hypertension. Depending on the demographic and the definition of hypertension, the prevalence of the condition varies. According to research conducted at institutions in Jimma and Addis Ababa, around one-third of diabetics also have hypertension. Abnormal lipoprotein levels, or dyslipidemias, are more likely in type 2 diabetics than in type 1 diabetics, provided that the latter have appropriate glycemic control. Type 2 diabetes is also more likely to be obese, and obesity is linked to hypertension and dyslipidemia. Up to 25% of diabetic patients in the west smoke cigarettes.

In patients with type 2 diabetes, the contribution of cardiovascular risk variables and their interactions to the risk of Coronary Heart Disease (CHD) was assessed. Across all Body Mass Index (BMI) groups, hypertension was revealed to be the most significant cardiovascular risk factor for CHD, with similar effects observed at all BMI levels. Particularly in the low weight population, an additive interaction between body weight and hypertension on CHD risk was noted. When the additive interaction between BMI and CHD risk was taken into account, a smiling curve was observed. This additive interaction accounts for 52% of the CHD risk in low-weight patients with co-occurring diabetes and hypertension.

The most frequent cause of mortality for diabetic people is CHD. For the appropriate use of scarce medical resources, stratification based on various risk factors and varying intensities of CHD screening have to be carried out for individuals with varying risk levels. Strict control of body weight is advised for CHD prevention in several clinical guidelines, as it is a known risk factor for the disease. The connection between body weight and CHD is still debatable. The risk of CHD progressively rises as BMI rises.

But the majority of research has only looked at the obese group, very seldom has the low body weight population which have been included. According to the current research, the low weight group had a higher risk of Coronary Heart Disease (CHD) than the normal weight group and an even higher risk than the overweight group among individuals with diabetes and hypertension. This result is in line with earlier clinical research on low body weight. According to a large cohort study, patients who are overweight or moderately obese had a lower risk of cardiovascular death, while those who are underweight have a higher risk.

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