Cardiovascular Risk Stratification and its Determinants Among Patients with Type 2 Diabetes Mellitus

Pooja Deb1, Ipseeta Ray Mohanty2, Sandeep Rai3
1 Tutor, Professor, Dept. of Pharmacology, 2 Professor, Dept. of Medicine, MGM Medical College, Navi Mumbai, Maharashtra

Sir,

Cardiovascular disease (CVD) is the major cause of death in patients with Type 2 diabetes mellitus (DM), as more than 60% of DM patients’ die of myocardial infarction (MI) or stroke, and an even greater proportion of patients have serious burdensome complications. Risk factor modification can reduce clinical events and premature death in people with established cardiovascular disease as well as in those who are at high cardiovascular risk. The objective of the study was to assess the WHO CVD risk score among Type 2 diabetic patients and determine the proportion with Very High, High, Medium and Low CVD Risk Categories. The WHO CVD risk prediction charts were used to categorize the DM patients based on their risk profiles and provide guidance on which specific preventive actions to initiate, and with what degree of intensity along with appropriate drug therapy.

Two hundred twenty patients of Type 2 diabetes mellitus who conformed to the specified Inclusion and Exclusion Criteria were enrolled for the study after taking consent. A Case record form especially designed for the study was administered to these patients, which included details regarding the demographic profile, patient profile and CVD risk factors. CVD risk stratification was undertaken using WHO/ISH CVD risk prediction charts for prevention of cardiovascular disease.

According to the WHO/ISH risk prediction chart, the Type 2 diabetic patients who have less than 10% chances of developing a cardiovascular event in the next ten years were found to be 64.54%. 17.72% of patients were at medium risk of developing a cardiovascular event. Diabetic patients who were at a high risk of CVD comprised of 6.36% of the total patient pool, while only 11.36% of patients were at very high risk of developing a cardiovascular disease. Obese patients in the very high CVD risk group were maximum (44%). It was also observed that 72% of patients in the very high-risk group have had poor glycaemic control. 36% and 50% of patients in the very high-risk group had dyslipidaemia and hypertension respectively. After applying the CVD risk stratification using the WHO/ISH risk prediction charts, it was found that patients in the moderate to high to very high CVD risk groups had associated risk factors of obesity, smoking, low physical activity, unhealthy eating practices and the risk factors like hypertension and dyslipidemia.

The application of the CVD risk prediction tool has allowed us to stratify the patients in various risk groups and given us an inclusive awareness of the various risk factors in type 2 diabetes mellitus. The results have provided baseline information and will certainly help to plan interventions for implementation of an intensive approach to cardiovascular disease risk stratification and modification at the level of the patient, physician and Institute.

References
