

Cardiovascular risk prediction, glycemic control, and determinants in diabetic and hypertensive patients in Massawa hospital, Eritrea: Cross-sectional study on 600 subjects



Berhe Tesfai

Massawa Hospital, Eritrea

Abstract

Background: Hypertension and diabetes are key determinants of cardiovascular risks. The classical risk factors for the development of cardiovascular disease in subjects with DM are poor glycemic control, obesity, dyslipidemia, and hypertension. As with many developing countries, Eritrea is facing the burden of non-communicable diseases (NCDs) as a result of current epidemiological and nutritional transitions. According to National Health Information System of Eritrea, DM is one of the leading causes of morbidity and mortality, mainly in adults. The objective of this study was to calculate 10-year incidence of cardiovascular risk, determine cardiovascular risk factors, and evaluate how diabetes and hypertension are controlled in patients in Massawa Hospital, Eritrea.

Methods: This was a hospital-based cross-sectional study using census sampling. A checklist and interview were used as data-collection tool from October 10 to November 20, 2020. Written consent was obtained from each study participant before starting the study. All patients with DM, hypertension or both, with complete clinical records and on regular follow-up at Massawa Hospital's NCD clinic, regardless of residence or age were included; and those who had incomplete medical records, communication disabilities, or mental disorders were excluded. Ethics approval was obtained from the Ministry of Health Research and Ethical Clearance Committee. WHO charts (age, sex, systolic blood pressure, DM, smoking, and cholesterol level) were used to predict Cardiovascular risk in patients with DM and hypertension. Descriptive statistics were used, and results were presented in percentages and tables, then $p < 0.05$ was considered significant.

Results: A total of 600 patients were enrolled in the study, dominated by the Tigrigna (58.7%) and Tigre (26.7%) ethnic groups. About half the patients (58.8%) had a body-mass index of 18–25 kg/m², with abdominal circumference of <95 cm (74%). Only 8% and 9.3% of the patients were smokers and alcohol consumers. A quarter of the patients (24.7%) reported vision problems, and 2.8% and 0.8% had a history of stroke and amputation, respectively.

Biography

Berhe Tesfai studied and graduated with a degree of Doctor of Medicine, from Orotta School of Medicine and Dental Medicine, sited in Asmara, the capital city of Eritrea, in January 2015. He worked as a medical doctor in different hospitals of the country. Since August 2018, He working as a medical director in one of the country's Zonal Referral Hospitals; Massawa Hospital. He did about 14 operational researches during my work time in which most of them are published on international journals. He participated in different zonal and national meetings, research conferences, and consensus workshops.



[3rd Annual Conference on Diabetes and Endocrinology](#) | October 29, 2021

Citation: Berhe Tesfai, Cardiovascular risk prediction, glycemic control, and determinants in diabetic and hypertensive patients in Massawa hospital, Eritrea: Cross-sectional study on 600 subjects, *Diabetes Management 2021*, 3rd Annual Conference on Diabetes and Endocrinology, October 29, 2021, 07