The Prevalence of Dyslipidemia and Hyperglycemia among Stroke Patients: A cross-sectional study

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Abstract:

Background/aim:
 Stroke or (cerebrovascular accident [CVA]) is defined as sudden or subacute onset of focal neurologic deficit, caused by the interruption of blood flow to parts of the brain. In this study, we aimed to investigate the association between dyslipidemia, hyperglycemia and other risk factors, and stroke in Palestine.

Materials and methods:
 A total of 70 patients with stroke were included in a cross-sectional study between November 2017 and February 2018. Stroke patients were diagnosed based on a CT scan reviewed by a neurologist. Fasting venous blood samples were collected to measure the lipid profile (cholesterol, low-density lipoproteins (LDL), triacylglycerols (TAG), high-density lipoproteins (HDL)), fasting blood glucose (FBG) and glycosylated hemoglobin (Hb_{A1c}) levels. An interview-based questionnaire, included background data, past medical history, family history and other risk factors of stroke, was completed in each patient with stroke.

Results:
The prevalence of dyslipidemia in stroke patients was (28.57%) with high LDL, (17.1%) with high cholesterol, (15.7%) with high TAG and (61.3%) with low HDL. About half of the patients (51.4%) had abnormal Hb_{A1c} and abnormal FBG (52.8%). We found that the majority of these stroke patients, (67.1%), were males, while (32.9%) of them were females. Only (11%) of patients were obese (BMI of more than 30 kg/m^2). Almost half of the patients (51.4%) were smokers. For family history, data showed that (81%) of patients had a family history of hypertension, (50%) had a family history of stroke and (58%) had a family history of diabetes mellitus.

Conclusion:
Most of the stroke patients were males and smokers. Most of these patients have very low HDL level, high FBG and Hb_{A1c} levels, hypertension, family history of hypertension and family history of diabetes. There is a fair number of patients with high LDL in this sample.