
RELATION OF ATHEROSCLEROSIS AND LIPID PROFILE INDICATORS

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Introduction: The prevalence of cardiovascular disease (CVD) and its associated costs continue to increase. CVDs are known as the leading cause of death. This takes the life of 17.7 million people annually, which is 31% of all deaths worldwide. The main cause of death from CVD is atherosclerosis. The lipid profile (total cholesterol (TC), triglyceride (TG), high density- lipoprotein cholesterol (HDL-C), low density- lipoprotein cholesterol (LDL-C) levels) plays a key role in the pathophysiology of CVD and is an important modifiable risk factor for CVD. Some studies have shown that the lipid profile was significantly associated with the presence and size of carotid plaque.

Methods: The present study included 399 patients (male 46.1%) who underwent a medical examination in the Hospital. Carotid artery was measured by color duplex scanning on a Vivid E9 cardiovascular ultrasound scanner from GE Healthcare's. The lipid profile – by the enzymatic method on an Abbott Architect analyzer c 8000 (USA).

Results: The frequency of plaques in our study is 36.09%. A comparative analysis of the presence of plaques (2 or more) in men and women showed the prevalence of this indicator in men. These data are similar to the results obtained among Kazakh living in Xinjiang province of China. Our study found that with age, the risk of plaque increases. We also found an age associated with TG (1.35), HDL-C (1.15) increases the risk of plaque. Among the tested indicators associated with the risk of plaque, we observed a significant association of obesity (1.26) and TG (1.31 times) with the occurrence of plaques ($p < 0,05$).

Conclusion: Our study shows preliminary results of the relationship lipid profile and carotid plaque in the developing of atherosclerosis in Kazakh population.