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THE BENEFITS OF DUPLEX SCANNING OF EXTRACRANIAL CAROTID PATHOLOGIES FOR RISK STRATIFICATION OF ISCHEMIC STROKE

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Abstract

Introduction: *Recent retrospective cohort study demonstrated the benefit of duplex scanning in the examination of the extracranial carotid artery pathologies for preventing cerebrovascular disorders.*

The aim of this study: *was to evaluate the clinical and demographical characteristics and outcome in patients treated at National Scientific Center of Surgery, after detecting extracranial carotid artery stenosis ≥70%.*

Material and methods: *A retrospective cohort study was conducted; 204 patients were included.*

Results: *The most significant risk factors were: ischemic heart diseases – 95.6%, arterial hypertension – 80.1%, chronic heart failure – 83.8%, cholesterol level above the norm of 5.2 mmol/L-39.2%; 30.4% of patients had a history of postinfarction cardiosclerosis. There were a significant statistically difference between the prevalence of extracranial carotid artery stenosis depending on the risk factors (blood cholesterol levels, a clinical history of chronic heart failure, and acute cerebrovascular diseases p=0.048, p=0.003, p=0.048 respectively (p>0.05)).*

Conclusion: *In summary, we conclude that surgery should be considered, and duplex ultrasound plays a crucial role in assessing the severity of carotid stenosis in atherothrombotic stroke patients with severe external carotid stenosis. These data indicate that physicians, should be aware of the usefulness of carotid duplex ultrasound scanning in stratifying the risk of cerebral and cardiovascular diseases based on various aspects.*

Keywords: *extracranial carotid artery, ischemic stroke, acute disorders, cerebral circulation, carotid artery stenosis.*

Introduction

Acute ischemic stroke is one of the most common causes of death and disability worldwide. The high prevalence of mortality and severe disability of the population as a result of ischemic stroke have become a common heavy medical and social burden [*Tsao C et al., 2023*]. According to the World Health Organization, over the past 16 years, stroke has been the second leading cause of

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