

PUBLICATIONS

THE ROLE OF ARTERIAL HYPERTENSION AND SMOKING IN ATHEROSCLEROTIC INVOLVEMENT OF THE BRACHIOCEPHALIC AND FEMORAL ARTERIES IN PATIENTS UNDERGOING ROUTINE HEALTH SCREENING

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The contribution of modifiable risk factors to peripheral atherosclerosis varies between populations. Uzbekistan combines a low prevalence of smoking with a high frequency of arterial hypertension (AH), so foreign data cannot be extrapolated directly. These two factors have not previously been compared against the ultrasound picture of the vascular wall in a routine screening cohort. To determine the contribution of AH and smoking to the prevalence and severity of atherosclerotic involvement of the brachiocephalic and femoral arteries in patients undergoing routine health screening in Uzbekistan. 198 patients (105 men, 93 women) aged 18–75 years were examined during routine screening at Central Clinical Hospital No. 1 of the Main Medical Directorate under the Administration of the President of the Republic of Uzbekistan in 2023–2025. All underwent duplex scanning of the brachiocephalic and femoral arteries with counting of involved segments and grading of stenosis. AH and smoking status were established from clinical and anamnestic data. Twelve-month follow-up recorded major adverse cardiac and cerebrovascular events (MACCE). Analysis: SPSS 26 and Statistica 12.0; χ^2 test, Mann–Whitney test, Spearman correlation. AH was present in 62 % of patients and was the leading modifiable risk factor: multisegmental brachiocephalic involvement was significantly more frequent in hypertensive than in normotensive patients. Smoking prevalence was only 4 %; smokers showed a trend towards more pronounced vascular wall changes, but the small number limits statistical significance. Over 12 months, the highest MACCE rate (23.7 % overall) occurred in patients with AH combined with multisegmental involvement. The low smoking frequency reflects regional sociocultural features and does not imply absence of individual risk in smokers. In this Uzbek cohort, AH is the dominant modifiable factor associated with peripheral atherosclerosis, whereas the contribution of smoking is limited by its low population frequency. These data support prioritising blood pressure control and early ultrasound screening in patients with AH, alongside continued anti-tobacco measures.