

SIGNIFICANCE OF CARRIER A2 POLYMORPHISM OF PLATELET GLYCOPROTEIN IIb/IIIa FOR ISCHEMIC STROKE DEVELOPMENT IN YOUNG AGE

M.D. Ivanov¹, B.B. Stamenov¹, R.S. Komsa-Penkova², S.P. Gecheva¹, Z. Lukanov¹

¹*University Hospital of Pleven & ²Medical University of Pleven, Pleven, Bulgaria*

ivanovmd@abv.bg

In recent years there has been a disturbing trend for the occurrence of cerebrovascular accidents in young age. Genetically determined risk for their development is the subject of intensive studies. Platelet glycoprotein IIb/IIIa is a member of integrin family of adhesive molecules and is part of the membrane complex involved in platelet aggregation, serving as a receptor for fibrinogen. OBJECTIVE: to evaluate the relationship between carriers of A2 polymorphism in platelet glycoprotein IIb/IIIa (GP IIb/IIIa) and development of ischemic stroke in young patients. MATERIAL AND METHODS: The study included 58 patients with ischemic stroke at a young age (between 26 and 45 years) and 80 healthy subjects for polymorphisms of carrier A2 GP IIb/IIIa. All of them isolated DNA from venous blood using the salt extraction and was performed allele-specific restriction DNA analysis to identify carriers of the A2 polymorphism. RESULTS: Carriers of polymorphisms A2 in GP IIb/IIIa was found in 23 (39.7%) patients with ischemic stroke and in 13 (16.3%) of healthy subjects, which showed significant statistical difference (OR: 3.387; 95% CI 1.431- 8.102, p=0.004).

CONCLUSIONS: The established relationship between carriers of A2 polymorphism in GP IIb/IIIa and ischemic stroke development in young age justifies its inclusion in the research algorithm for diagnosis and prevention the thrombotic incidence in the risk groups. Primary prevention of cerebral ischemia in young people through timely detection and response to risk factors has great potential to reduce incidence of ischemic stroke and to limit its serious consequences.