

INTERACTION BETWEEN vWF LEVELS AND ASPIRIN RESISTANCE IN ISCHEMIC STROKE PATIENTS

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Background and aim: von willebrand factor (vWF) mediates the adhesion of platelets to sites of vascular injury and forms an adhesive bridge between platelets and vascular subendothelial structures as well as between adjacent platelets at sides of endothelial injury. vWF levels increase in acute phase ischemic stroke because of endothelial dysfunction and thrombus formation and may reduce acetylsalicylic acid(ASA) efficiency in hemostatic cascade. The aim of the study is to investigate the relationship between vWF levels and ASA resistance in ischemic stroke patients.

Materials and methods: 50 acute ischemic stroke patients (mean age: 66.32±12.983 years, 34 male) who have taken 300 mg/day aspirin at least 10 days and 25 healthy volunteers as a control group compared by using platelet function analyzer(PFA) 100 test and all risk factors(age, gender, hemoglobin, platelet, hematocrit level, hypertension, diabetes mellitus, hypercholesterolemia, coronary artery disease, serum vWF level, smoking and intake of angiotensin converting enzyme inhibitors, nitrates and proton pump inhibitors and previous cerebrovascular disease) were researched for ASA resistance.

Results: Aspirin resistance was 32% in study group and 20% in control group (p=0.140). We only found elevated vWF levels in ASA-non responders and ischemic stroke group statistically significant associated with aspirin resistance (p=0.05).

Conclusion: vWF levels increase in ASA non responders and ischemic stroke group in acute phase. High vWF levels may lead to ASA resistance and recurrent stroke.