



Biomarkers As Predicting Models Of Stroke Incidence

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OBJECTIVES: biomarkers refer to indicators measured by chemical or biologic tests using blood or urine . The predicts physiologic or disease states, or increased disease risk. Risk stratification of persons at risk of future vascular event can separate subpopulations that would benefit most from established and emerging stroke preventive therapies.

METHODS: Biomarkers representing various components of the inflammatory cascade, including:

1-systemic inflammation (c-reactive protein{CRP}, interleukin 6, monocyte chemotactic protein1,tumor necrosis factor α 1,tumor necrosis factor receptor2{TNFR2}, osteoprotegrin, fibrinogen)

2-vascular inflammation/ endothelial dysfunction (intercellular adhesion molecule1,CD40 ligand, P-selectin,lipoprotein associated phospholipaseA mass and activity,total homocysteine (tHcy),and vascular growth factor(VEGF),oxidative stress(myeloperoxidase)

RESULTS: circulating biomarkers of inflammation and endothelial dysfunction are associated with ischemic stroke in stroke free community- dwelling individuals and they can be used to refine stroke prediction models inclusion of 4 biomarkers (CRP-TNFR2-tHcy-VEGF)

DISCUSSION: Although the roles of biomarkers are basically diagnosing the disease and predicting the outcome , biomarkers inpatients with stroke can also provide a large variety of other information about the risk of future stroke, possible stroke mechanisms for biomarker-guided treatment. Among circulating biomarkers VEGF was the biomarker that had the greatest individual degree of discrimination for future ischemic stroke. Data from studies have recently demonstrated the relation between VEGF and ischemic stroke pathogenesis is, however not well established. total homocysteine and CRP are well established markers of increase stroke risk , the former via its role in accelerated atherosclerotic disease and the latter marking systemic inflammation and plaque instability. It has been demonstrated independent association between TNFR2 and ischemic stroke, preliminary data have shown the lower vascular events, in patients with rheumatoid arthritis on TNF inhibitors , particularly in patients with longer duration of use, and characterizing the protective effects Of TNF inhibitors in stroke patients

CONCLUSIONS: recent study reported that multiple microparticle biomarkers in addition to existing protein biomarkers are valuable for predicting future of cerebrovascular events

Key words: ischemic strike, biomarker , risk factor , prediction



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