GENETIC ASSOCIATION OF LEUKOCYTES LEVELS DURING THE ACUTE PHASE OF STROKE

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BACKGROUND & OBJECTIVE

Several genes are associated with stroke risk, however, little is known about stroke outcome. Neutrophils and other immune cells have a key role in inflammation during the acute phase of stroke and have been associated with poor functional and neurological outcome.

Our aim is to find genetic risk factors associated with neutrophils levels (NL) and white blood cells counts (WBCc) during the acute phase of ischemic stroke.

RESULTS - NL

A total of 941 patients were analyzed for NL and 4.430.759 SNPs pass QCs. We found a Genome-Wide suggestive associations for NL on Chr6 (Top-SNP p-value = 4.3e-07).

RESULTS - WBCc

A total of 1575 patients were analyzed for WBCc and 5.271.103 SNPs pass Qcs. We found a Genome-Wide suggestive associations for WBCc on Chr4 (Top-SNP p-value = 4.3e-07).

METHODS

Patients from 8 different cohorts with data of NL and WBC during the acute phase (<24h stroke onset) were included in the study. The phases of the study were: Genotyping, Imputation, SNP association analysis and Metaanalysis.

CONCLUSIONS

We have found new genetic associations with NL and WBCc during the acute phase of stroke. These SNPs were not previously associated with leukocytes levels in healthy population, suggesting a different modulation of immune cells during the acute phase of stroke.

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