P-518 - DEPRESSION IN COMBINATION WITH KIBRA “CC” AND CLSTN2 “TT” ALLELES IS ASSOCIATED WITH POORER EPISODIC MEMORY PERFORMANCE

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Introduction: The KIBRA rs17070145 “CC” and the CLSTN2 rs6439886 “TT” genotypes have been associated with poor episodic memory performance in healthy persons. Episodic memory is also impaired in depression. Therefore, we hypothesized that depressed persons with the “CC/TT” genotype combination would perform worse in comparison to other KIBRA and CLSTN2 combinations.
Objectives: To examine the effects of KIBRA and CLSTN2 on episodic memory performance in nondepressed and depressed elderly persons (60+).
Methods: Genotyping from peripheral blood samples and episodic memory testing were performed in the population-based SNAC-K study. All non-demented participants (n=2332) were categorized according to depression status (nondepressed/depressed) following ICD-10 criteria. Dichotomous variables were used for KIBRA (any T/CC) and CLSTN2 (any C/TT).
Results: A three-factor MANCOVA revealed no main effects, but two significant interaction effects for episodic memory performance. Post hoc test for KIBRA x CLSTN2 revealed that persons with the “CC/TT” genotype exhibited poorer performance on free recall and recognition. Further, the three-way interaction (KIBRA x CLSTN2 x depression) showed that the negative effect of the “CC/TT” genotype was most pronounced among depressed persons Depressed “CC/TT” consistently performed at the lowest level.
Conclusions: The combination of the KIBRA “CC” and the CLSTN2 “TT” genotypes was associated with poorer episodic memory performance in both nondepressed and depressed persons. Depression in combination with the “CC/TT” genotype was especially disadvantageous for episodic memory performance. This supports the view that effects of specific SNPs on performance may be most easily disclosed at suboptimal levels of cognitive ability, e.g. in depression.

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