



THE ASSOCIATION BETWEEN SIRT1 RS3740051 AND AGE-RELATED MACULAR DEGENERATION

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INTRODUCTION

Age-related macular degeneration (AMD) is neurodegenerative disease that causes loss of vision mostly in people over 60 years in developed countries [1]. The precise pathogenesis of AMD not yet clarified, although it has been associated with genes regulating complement, lipid, angiogenic, and extracellular matrix pathways [2]. The SIRT1's dysregulation leads to disappearance of protective effect against retinal degeneration [3].

AIM

To examine rs3740051 variant in SIRT1 gene promoting to AMD development.

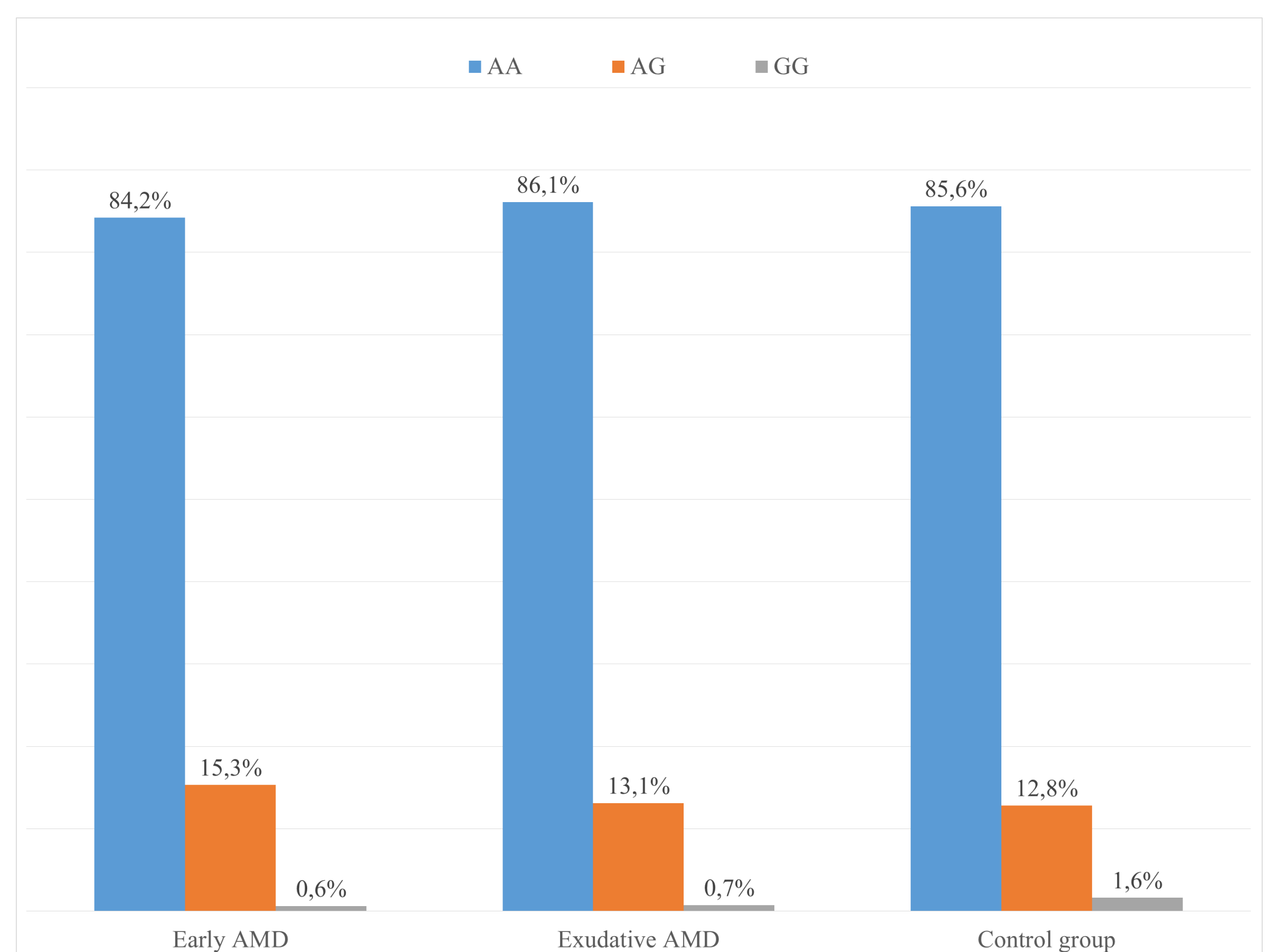
MATERIAL AND METHODS

The study enrolled 181 patients with early AMD, 140 patients with exudative AMD and 189 healthy control subjects. DNA extracted from blood using the silica-based membrane technology utilizing a genomic DNA extraction kit (QIAamp DNA Mini Kit, Genomic DNA Purification Kit, QAIGEN), according to the manufacturer's recommendations. The genotyping performed using the RT-PCR method. Statistical analysis was performed using the SPSS / W 20.0 software (Statistical Package for the Social Sciences for Windows, Inc., Chicago, Illinois, USA).

RESULTS

Genotype (AA, AG, GG) distributions were determined in early AMD, exudative AMD and control groups: 84.2 %, 15.3%, 0.6%; vs. 86.1%, 13.1%, 0.7% and vs. 85.6%, 12.8%, 1.6%, respectively (Figure 1). Statistical analysis did not reveal significant differences between patients with early AMD and healthy controls ($p=0.519$). Also, genotype distribution did not differ comparing exudative AMD and control groups ($p=0.781$).

Figure 1. Frequency of SIRT1 rs3740051 genotypes in patients with early AMD, exudative AMD and control group



CONCLUSION

There was not found any associations of SIRT1 rs3740051 with early and exudative AMD development.

References

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