Author’s response to reviews

Title: SIRT1 (rs3740051) role in pituitary adenoma development

Authors:
Rasa Liutkeviciene (rasa.liutkeviciene@lsmuni.lt)
Alvita Vilkeviciute (alvita.vilkeviciute@lsmuni.lt)
Greta Morkunaite (greta.morkunaite@lsmuni.lt)
Brigita Glebauskiene (brigita.glebauskiene@lsmuni.lt)
Loresa Kriauciuniene (loresa.kriauciuniene@lsmuni.lt)

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Author’s response to reviews:

Dear Editor and Reviewer,

We kindly appreciate the revision of our manuscript. We made the correction according to reviewer's comments and tried to reduce text overlaps with other publications. In the methods section, we cited our previous articles because of similar methods used in this study.

Answers to the reviewer's comments:

GENERAL COMMENTS: The authors properly answered my questions and made appropriate changes to the text (however, these changes have not been highlighted as mentioned). The new manuscript version has been greatly improved. Only, minor issues need to be corrected.

ADDITIONAL REQUESTS/SUGGESTIONS:

Abstract

Page 2, Line 38: A number (1) is missing in the ID SNP.

It was corrected and highlighted in red.

Abstract

Background: Our purpose was to determine if SIRT1 (rs4746720, rs3740051) genotypes have an influence on the development of pituitary adenoma (PA).

Methods: The study group included 142 patients with pituitary adenoma (PA) and the control group consisted of 826 healthy people. The genotyping of SIRT1 (rs4746720, rs3740051) was carried out using the real-time polymerase chain reaction method.
Results: Statistically significant results were obtained in the analysis of SIRT1 rs3740051. Significant differences in genotype (G/G, G/A, A/A) distribution were obtained comparing patients with PA without recurrence and PA with recurrence (0 %, 17.9 %, 82.1 % vs. 6.7 %, 6.7 %, 86.7 %, respectively, p=0.022). Also, statistically significant differences were observed when comparing the genotype (G/G, G/A, A/A) distribution in the non-invasive PA group and the invasive PA group (3.4 %, 25.9 %, 70.7 % vs. 0 %, 8.3 %, 91.7 %, respectively, p=0.003), and allele G was less frequently observed in invasive PA, than in non-invasive PA (4.2 % vs. 16.4 %, p<0.001). Further analysis revealed that G/A (OR=0.261; 95 % CI:0.099-0.689; p=0.007) and each allele A (OR=0.229; 95 % CI:0.091-0.575; p=0.002) were associated with lower odds of occurring an invasive PA.

Conclusions: Our study revealed that SIRT1 rs3740051 is associated with PA recurrence and invasiveness. The haplotype containing alleles C-A in rs12778366-rs3740051 was found to be associated with increased odds of PA development as well.

Conclusions

Our study revealed that SIRT1 rs3740051 is associated with PA recurrence and invasiveness. The haplotype containing alleles C-A in rs12778366-rs3740051 was found to be associated with increased odds of PA development as well.