

THE *ANKK1* RS1800497 POLYMORPHISM IS ASSOCIATED WITH SEVERE OBESITY IN A COHORT FROM RIO DE JANEIRO: A CASE-CONTROL STUDY

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Introduction

- Obesity is a concern due to its epidemic proportions.
- Variants in *ANKK1* can interfere with the development and functionality of the dopaminergic system, potentially influencing addictive behavior.
- This study aimed to evaluate the influence of gene polymorphism related to the dopaminergic system on the development of severe obesity.

Methods

- Sample: 538 individuals
- Cases: 332

BMI $\geq 35 \text{ kg/m}^2$

- Controls: 206

BMI 18,5- 24,9 kg/m^2



1 - Participants

2 - Data collection

3 - Scale HADS

4 - Sample collection

5 - Biochemical analysis

6 - DNA extraction

7 - Real time PCR

8 - Data analysis



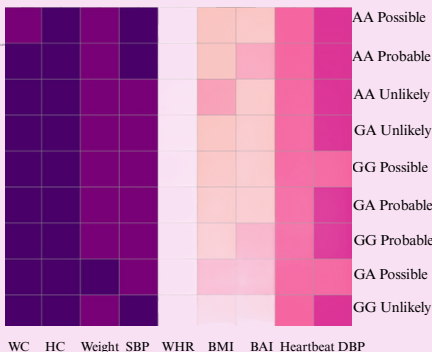
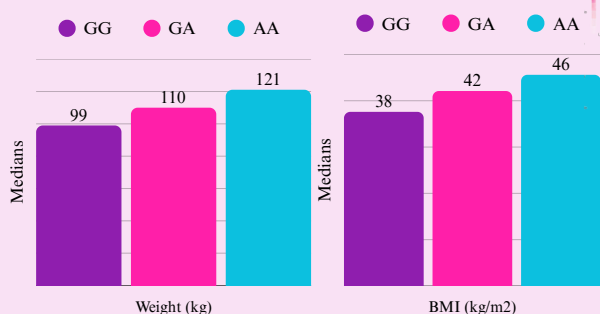
Results

Gene polymorphism and severe obesity

- AA genotype (OR = 3.54, CI 95% 1.37 - 9.13, $p = 0.009$)
- Allele A (OR = 3.54, CI 95% 1.37 - 9.13, $p = 0.009$)
- Dominant model (OR = 1.789, CI 95% 1.173 - 2.729, $p = 0.007$)

ANKK1 rs1800497 genotypes and anthropometric factors in depression

Gene polymorphism and anthropometric



Conclusion

The *ANKK1* rs1800497 is a potential biomarker for severe obesity susceptibility, other parameters relevant to obesity, and as with mental health.

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