Evidence suggests a causal relationship between obesity and asthma(1); however mechanisms remain unknown. Neurogenic inflammation participates in the development of both asthma (2) and obesity (3).

• Aim:
To analyze the effect of a selective antagonist for the substance P (SP) receptor on metabolic and systemic biomarkers related to obesity and on allergen inflammatory parameters, using a murine model of diet-induced obesity and OVA-induced allergic sensitization and aerosol challenge in Balb/c mice.

The overall protocol, as well as the material and methods used in this study, is described in Figure 1.

CONCLUSIONS

• Blockade of NK1-R improved metabolic and systemic biomarkers related to obesity and allergen-sensitization and bronchial inflammation in OVA-sensitized mice fed with a high fat diet.
• We previously demonstrated increased SP serum levels in obese-asthma phenotype in mice, as well as an interaction between obesity and asthma on those levels (4).
• This work reinforces the hypothesis of Substance P as a putative therapeutic target in the specific obese-asthma phenotype, which is increasing worldwide.

REFERENCES

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