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Title: A unique session of aerobic exercise does not decrease pulmonary inflammation in a murine mice model of asthma

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Body: Recent studies have shown that long term exercise training reduces airway inflammation; however, there is a lack of evidences on the effects of a single session of exercise. Objective: To evaluate the effects of a session of aerobic exercise in the airway inflammation in a murine animal asthma model.Methods: Thirty two mice were divided in Groups (n=8): Control (CT), Aerobic Training (AT), OVA and OVA+TA. Groups OVA were sensitized by intraperitonial injections of OVA(50ug/mice in the days 0, 14 and 28) followed by 30 min of 1% OVA inhalation (days 21th, 23th, 25th and 28th). CT and AT groups received saline. Exercise (AT groups) was performed in the day 28thfor 60 min at 50% intensity of maximal capacity. Bronchoalveolar fluid (BALF), lung tissue and blood were collected in the day 29th. It was evaluated: total and different cells in BALF, IgE and IgG1 titers, peribronchial eosinophils, and airway remodeling (smooth muscle, collagen and elastic fibers, and mucus expression). Eotaxin, RANTES, VEGF, ICAM, VCAM, IL-1ra, NF-kb and Foxp3 in the airways were also evaluated. Statistical significance was evaluated by two way ANOVA followed by Bonferroni or Newman-Keuls. Results: OVA increased IgE and IgG1 levels, total and eosinophil cell counting, and all remodeling features (smooth muscle, collagen and elastic fibers, and mucus expression)($p<0.05$). In addition, OVA increased the expression ofeotaxin, RANTES, VEGF, ICAM, VCAM, NF-kb and Foxp3 ($P<0.05$). On contrary, a single bout of aerobic training did not changed any of these effects ($P>0.05$).Conclusion: A single exercise session seems do not have any anti-inflammatory effect in a murine asthma model.