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Title: Does allergens influence resistin levels in children with allergic rhinitis?

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Body: BACKGROUND: Resistin, a serum protein produced by adipocytes and circulating macrophages, seems to be associated with inflammatory states. Many authors reported high levels of this serum adipokine in respiratory diseases such as allergic rhinitis (AR). AIM: The purpose of this study was to confirm the relationship between resistin levels and atopy and to assess whether these levels were influenced by Skin Prick Test (SPT) patterns in children with nasal obstruction. METHODS: 35 children (15 males; mean age 9 yr) were selected for nasal obstruction: 12 monosensitized to house dust mites (HDM), 10 to grass pollens (GP) and 13 with negative SPT to airborne allergens. A blood sampling to evaluate resistin serum values was performed in all subjects. RESULTS: Atopic patients showed significantly higher levels of serum resistin than non atopic children (4.6ng/ml vs 5.7ng/ml; $p < 0.05$). Moreover resistin mean values were 5.5 ng/ml in children sensitized to HDM and 3.6 ng/ml in those sensitized to GP. This difference was statistically significant ($0.001 < p < 0.01$). CONCLUSIONS: Our results confirm that serum resistin levels are associated with the allergic inflammatory process in children. Among patients with AR higher resistin serum levels also showed a stronger association with HDM monosensitization. Thus, resistin, as a proinflammatory protein, may be influenced also by the persistence of the allergic trigger and perennial allergens may increase its levels more than seasonal allergens.