Endothelin-1 in nasal lavage fluid of allergic rhinitis patients - new mediator of allergic rhinitis

**Summary**

The nasal epithelium is considered to play an active role in the allergic inflammation through its capacity to synthesize and release a wide range of cytokines and mediators. Few studies have investigated the involvement of endothelin-1 in the pathogenesis of inflammatory diseases of the upper airways. To examine the release of endothelin-1 from nasal mucosa after allergen challenge we investigated 24 patients. 15 subjects (7 male, 8 female) allergic to birch pollen aged 37.1 ± 4.9 years participated in the study. Nasal birch allergen provocation with following lavage was performed in all subjects. Endothelin-1 in the nasal secretion were assayed before and after challenge. Increase in concentration of endothelin-1 in nasal lavage fluid from allergic patients were significantly higher than in control group respectively from 18.33 ± 5.47 fmol/ml to 26.41 ± 6.92 fmol/ml versus 18.8 ± 3.99 to 19.80 ± 4.18 fmol/ml (p < 0.05) in controls. We conclude that endothelin-1 could be involved in the pathogenesis of seasonal allergic rhinitis.