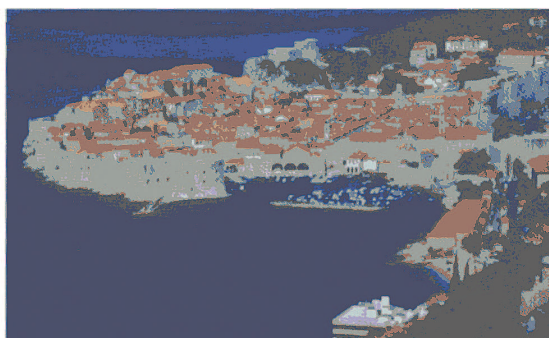




ABSTRACT BOOK



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EAACI

15 patients had allergic asthma alone. In this study there was no difference found in levels of FeNO, FEV1 and ECP in evaluated groups.

In this retrospective study the nasal inflammation did not affect the level of inflammatory - and bronchial obstruction - parameters in asthma patients.

Inflammatory response could have been modified with treatments, smoking status and phase of the disease (exacerbation, stabile phase) and therefore further prospective studies should follow.

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STUDY OF A LONG-TERM EFFECT OF TOPICAL CAPSAICIN TREATMENT IN NASAL POLYPOSIS

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The aim of this study was to estimate efficacy of topical capsaicin treatment in patients with nasal polyposis during a 2-year period.

Twelve non-allergic patients with massive sinonasal polyps who were not willing to undergo surgical treatment were included in this study. Six male and 6 female, 7 previously operated, all after ineffective topical steroid treatment. For 3 consecutive days the patients received 0.5 ml 30 mumol/l capsaicin solution sprayed in each nostril, and 100 mumol/l of capsaicin solution on days 4 and 5. The treatment scheme was repeated every 3 months during a 2-year period.

The questionnaire was completed right before the first application, a month after the first application, and every 3 months during a 2-year period. Scored symptoms were following: congestion, postnasal drip, nasal secretion, headache, sneezing, cough, facial swelling and olfaction. Symptoms were scored for intensity from 0 to 3, and for frequency from 0 to 4. Punch biopsies of the polyps were performed before the application, half an hour after last application and 3 weeks later. Specimens were stained with HE and Giemsa, and immunohistochemically with IgE and IgA monoclonal antibodies. Control specimens were nasal polyps from the operated patients who were not treated with capsaicin. The correlation between some histopathological parameters

(IgE, IgA, mastocyte and eosinophil infiltration) and subjective scores was analyzed. Conservative treatment of a massive nasal polyposis with a repeated topical capsaicin application during a 2-year period was estimated.

Eight patients had a statistically significant improvement in total symptom scores and in majority of single scores during the observed period. Three patients underwent surgical procedure (FESS) because of a poor improvement after capsaicin therapy. One patient was lost to control.

Topical capsaicin treatment was found to be an efficient therapy in the majority of treated patients according to selection criteria in this study, and could be a substitute if other medical or surgical treatment was found inefficient. Because of the small number of patients we are not able to make a conclusion about a possible impact of the observed histopathological parameters on subjective symptom scores.

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IL-8 PRODUCTION AND APOPTOSIS OF NASAL EPITHELIAL CELLS IN RESPONSE TO DEXAMETHASONE

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IL-8 production by epithelial cells represents one of the key features of chronic airway inflammation as seen in chronic rhinosinusitis with/without nasal polyps. The immunologic regulation of IL-8 production and the effects of the anti-inflammatory drug dexamethasone on IL-8 production by epithelial cells remain unknown.

Nasal epithelial cells (NEC) were freshly isolated from nasal mucosa of patients with NP (n=12) and from nasal mucosa of healthy donors (n=19). 10⁵ epithelial cells were incubated with IL-1 α (10ng/ml), TNF- α (10ng/ml), dexamethasone (10, 100, 1000 μ g/ml) or combinations. After 24h, IL-8 levels were determined in supernatants of epithelial cells by ELISA. Finally, hNECs isolated from healthy nasal mucosa and incubated with increasing doses of dexamethasone were stained with trypan-blue and annexin-FITC/PI to estimate the degree of apoptosis.

NECs from healthy and nasal polyp patients produced equal levels of IL-8 upon IL-1 α stimulation with

TNF- α having similar, but less potent effects in both groups. Dexamethasone did not alter IL-8 production by epithelial cells stimulated with both inflammatory cytokines. Dexamethasone appeared to induce a dose-dependent IL-8 production by epithelial cells at the low dose, with the induction of apoptosis of epithelial cells at the highest doses.

IL-8 production by NECs does not differ between epithelial cells of NP and healthy individuals under baseline conditions or after stimulation. Despite its anti-inflammatory effect, dexamethasone induces the secretion of IL-8 from nasal epithelial cells in a dose-dependent fashion, with abrogation of IL-8 production at high dose due to the induction of apoptosis in NECs.

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ROLE OF VEGF AND PLGF IN ALLERGIC AIRWAY INFLAMMATION

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VEGF-A (vascular endothelial growth factor-A) has been implicated in upper airway diseases such as allergic rhinitis and chronic rhinosinusitis with nasal polyps. The role of other members of VEGF family such as PlGF (placental growth factor) in upper airway diseases has not yet been evaluated. The aim of this study is to estimate the role VEGF and PlGF in a mouse model of allergic airway inflammation.

In the mouse model of experimental asthma expression levels of VEGF, PlGF and their receptors were determined by real time RT-PCR in bronchial and nasal tissue and ELISA in BALF, NLF and/or lung homogenates. Differential white blood cell counts were performed on BALF. Bronchial responsiveness to methacholine was determined using Flexivent technique. Additionally, effect of neutralizing PlGF on the outcome of airway inflammation was evaluated.

Constitutive expression of VEGF was relatively higher in the nose than in bronchi (NLF: $395,8 \pm 186,2$ vs BALF: $221,8 \pm 47,8$ pg/ml, $P=0,55$) whereas PlGF was undetectable in both lavages. Surprisingly, VEGF and its receptors were downregulated in bronchi of mice with experimental asthma while their levels remained unaltered in nasal tissue. In contrast, PlGF levels were

strongly increased in bronchi of OVA-allergic mice ($65,4 \pm 6,8$ pg/mg) compared to controls ($17,8 \pm 1,2$ pg/mg, $p < 0,005$). PlGF neutralization reduced airway hyperresponsiveness ($24,4 \pm 3,9$ to $18,9 \pm 0,9$, $P=0,25$) and the number of BAL-infiltrating neutrophils in mice with experimental asthma.

Unlike VEGF, PlGF is upregulated in bronchi of mice with experimental asthma and may account in part for the influx of neutrophils and concomitant airway hyperresponsiveness.

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ALLERGIC RHINITIS AND ASTHMA IN CHILDREN

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Allergic rhinitis and asthma often coexist in the same patients. The aim of the study was to show the prevalence of allergic rhinitis (AR) in asthmatic children.

In our institution 115 children with asthma were examined. 56,5% were male, mean age 8.3 yrs. Intermittent asthma was present in 30.9% of patients, 44,8% had a mild persistent, and the others had a severe persistent asthma. Diagnosis of AR was based on anamnestic data, skin prick test, main symptoms and ORL status.

AR was displayed in 68.7% of children. Intermittent rhinitis with moderate-severe degree was demonstrated in 14 of them, the others had persistent AR and in 41.5% of them it was with a moderate to severe degree. Nasal symptoms preceded asthma in 65.8% of children. Dermatophagoides pteronyssinus sensitivity was confirmed in 2/3 of the patients with skin prick test. Over 80% of them were with persistent AR and asthma. Pollen sensitivity had 20.9% and all of them were with intermittent AR. Dominant symptom in 68.3% of the patients was nasal blockage, most of them with Dermatophagoides sensitivity. In this group also concomitant sinusitis was present. Sneezing and rhinorrhea were main symptoms in 22.8% patients, all of them with pollen sensitivity. Most of these children also had associated conjunctivitis.

The study confirmed that there is a strong association between allergic rhinitis and asthma in children.