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Occupational Flaxseed Allergy (Conjunctivitis): A Case Report
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Background: K.F. a 19 y/o male, with history of atopy (food/drug allergy, atopic dermatitis, asthma and or rhinitis) developed conjunctivitis (without cough or rhinitis) on the third month of exposure to an environment of dust from sieving of ground flaxseeds (imported brown organic Canadian Flaxseeds). Exposure to this dust caused severe itching and tearing with prominent development of "red eyes" quickly after beginning of exposure with complaints abating during weekends. Due to eye scratching he also developed significant palpebral edema and purulent discharge.

Methods: Prick skin Testing (H-S Lancetter, results read at 15 minutes, with positive and negative controls) with a panel of 20 inhalant and food allergens (Diater Labs,Argentina) was performed.

Results: Commercial Allergens were found negative at 10 minutes reading (0 mm papule/0 mm erythema) for inhalants such as: mites, blomia t epithelia, grass pollen, shellfish, fish mix and coconut; only positive finding was to mold mix (5 mm papule/10 mm erythema). Prick to Prick skin (PPT) testing to a solution of flaxseed: 1 gram of flaxseed brought by patient from work place/ 1 mL of phenol saline, was positive at 20 minutes (papule 12 mm/erythema 25 mm). This same solution was applied to 5 controls (with no symptoms after ingestion of exposure to flaxseed) and found negative.

Conclusions: Patient improved with use of goggles and removal from sieving area, remaining free of symptoms, as of today. Patient refused mucosal/oral challenge with a solution of flaxseed or other allergy diagnostic procedures. Though PPT skin testing may suggest a possible IgE mediated reaction.

1. Unable to be confirmed by other means (challenge, IgE intears for flaxseed, etc); this is-to our knowledge- the first case of isolated conjunctivitis from exposure to flaxseed sieved dust. Flaxseed Allergy, in spite of its wide spread used and human consumption (mainly as dietary fiber) has been infrequently reported, with occasional cases of anaphylaxis.

2. We report a case of isolated conjunctivitis on exposure to dust from sievings of ground flaxseed.

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PATHOPHYSIOLOGY OF CHILDHOOD ASTHMA

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Involvement of IL-10 Gene Promoter Polymorphisms in the Susceptibility for Childhood Asthma
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Background: Asthma and atopy have a complex background which may result from the interaction of genes and environments. Interleukin (IL)-10 is known to play various roles in immune-regulating and anti-inflammatory responses. The aim of this study was to evaluate the possible effect of the IL-10 promoter polymorphisms on susceptibility to childhood asthma.

Methods: We recruited 333 patients with atopic asthma, 55 with non-atopic asthma, and 248 normal controls. We performed a genetic association study of 3 genetic polymorphisms (IL-10–1082A>G, IL-10–819T>C, –592A>C) of the IL-10 promoter.

Results: There was no difference between atopic asthma, non-atopic asthma and normal controls in allele, genotype or haplotype frequencies of these IL-10 polymorphisms. However, the –1082A>G polymorphism and ATA haplotype in the IL-10 promoter gene were associated with airway hyperresponsiveness (AHR) and the –819T>C, –592A>C, and ATA and ACC haplotypes were also shown to be related with serum eosinophil cationic protein (ECP).

Conclusions: Our results suggest that the polymorphisms within the IL-10 promoter may have a disease-modifying effect in asthmatic airway.

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Serum NT-3 and NT-4 Levels are Associated with Clinical Severity in Asthmatic Children
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Background: Neuronal modulation of inflammation and airway hyper-responsiveness has been well described in asthma and neutrophils provide the link between inflammation and neuronal dysfunction. In humans, elevated BDNF, NGF and NT-3 levels have been found in bronchoalveolar lavage fluid (BALF) following allergen provocation. Moreover, BDNF levels are significantly higher in untreated asthmatic patients in comparison to those treated with inhaled glucocorticoids and non asthmatic controls. It has also been shown that allergic inflammation increases local all 4 neurotrophins production that are important mediators of eosinophil survival in BALF. The aim of this study was to analyze if levels of neurotrophins in serum of asthmatic pediatric patients are altered in the course of disease (exacerbation and asymptomatic period) and therefore may serve as potential biomarkers for disease activity or symptoms severity.

Methods: In the study we included 98 children diagnosed with asthma. The blood was collected twice: during exacerbation and in the asymptomatic period. The serum levels of 4 neurotrophins (BDNF, NGF, NT-3, NT-4) were analyzed with use of DuoSet ELISA Development Kit (R&D). Statistical analysis was performed with Statistica v. 9.0.

Results: Analysis revealed no significant differences in neurotrophins levels in serum between asthmatic patients during asthma exacerbation and asymptomatic period. However, we found that serum levels of NT-3 and NT4 correlate with disease severity, being significantly lower in mild asthmatics as compared to patients with moderate and severe asthma (P < 0.01).

Conclusions: Our results suggest that neurotrophins levels do not seem to correlate with the clinical symptoms activity in the course of asthma, however 2 of them (NT-3 and NT-4) correlate with disease severity.

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Association between Eosinophilic Airway Inflammation and Persistent Airflow Limitation in Asthmatic Children
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A 9-year old boy (personal history negative as to trauma of
1.3%,
Dorins Farcau, MD,
Abstracts
We present the cases of 2 patients diagnosed with recurrent
A tracheal diverticulum (TD) is very rare congenital malfor-
0.7 vs 1.6
P
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635 mg resulted. We performed both tests
P
0.001) compared to controls. No
Our
To describe the accuracy of bronchial challenge tests
P
0.001) and postBD FEV1/FVC (r
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0.002),
Eosinophilic airway in
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We selected 27 patients who attended consecutively to our
limitation, which is manifested by low postBD FEV1 and postBD FEV1/
Conclusions: Our findings suggest that sputum eosinophilic inflammation,
especially ECP, is associated with pulmonary function and persistent airflow
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PEDIATRIC ASTHMA
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Not All Who Wheeze Have Asthma—Tracheal Diverticulum with Stenosis of Trachea in 9 Years Old Boy
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Background: A tracheal diverticulum (TD) is very rare congenital malfor-
malformation. The prevalence is about 0.3% in children over 10 years of age
according to fiberoptic bronchoscope studies and it is rarely reported in
clinical practice (3). Here we describe our recent experience in succesfully
diagnosing and treating a 9-years old box suffering from membranous stenosis of trachea with trachea diverticulum.
Methods: A 9-year old boy (personal history negative as to trauma of
respiratory tract and intubation and atopy) was admitted to hospital with
wheezing and progressive dyspnoea during the 6 months to restrict basic
locomotion and reading of text. Multislice computed tomography of the chest
showed surprising incidental finding of a tracheal diverticulum (6 mm × 2
mm) and 3-dimensional reconstruction CT stenosis of trachea approximtely
1.5 cm below vocal corde and orificium of tracheal diverticulum (the 2nd
cartilage of trachea). Pulmonary function tests revealed reduction of spiro-
metric values, with no post-bronchodilator change. Subsequent flexible bron-
choscopy showed circular stenosis of trachea and orificium of TD. Subsequently, the vaporization by NdYAG laser - Sharplan 3000, with energy
of 30 W was performed via flexible bronchoscopy under general anes-
thesia with a laryngeal mask. The dilatation by balloon (Boston Scientific)
was performed to widen the diameter of trachea up to 8 mm.
Results: After 1 week, pulmonary function test revealed normal parameters
without pathological symptoms.
Conclusions: In conclusion, we have summarized the case of an 9-year old
boy with membranous stenosis of trachea and trachea diverticulum, a very
rare congenital anomaly. This abnormality can be clearly diagnosed by
multislice CT and 3-dimensional reconstruction CT stenosis of trachea. Using
the interventional bronchoscopy of membranous circular stenosis of trachea is
adequate solution in children too.
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Recurrent Wheezing in Childhood—Is It Always Asthma?
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Napoca, Romania.
Background: Clinical presentation of the bronchial obstruction in children is
most often highly suggestive of bronchiolitis, recurrent wheezing or asthma.
Methods: We present the cases of 2 patients diagnosed with recurrent
bronchiolitis and asthma, non-responsive to treatment.
Results: The first patient, a 9-year-old boy presented wheezing, non-
productive cough, dysnea, aquous rhinorrhea, sneezing and nasal itching
interpreted as allergic asthma associated to allergic rhinitis as he was
sensitized to house-dust mites and dog. A treatment with inhaled cortico-
steroids and antihistamine was prescribed with little improvement of asthma
symptoms. Six months later the patient presented for vomiting and productive
cough. Thoracic ultrasound suggested achalasia, diagnosis confirmed through
esophageal manometry and barium swallow. Surgical treatment led to
resolution of asthma-like symptoms with persistence of a mild intermittent
rhinitis. In the second case, a female patient presented 2 episodes of
uncomplicated bronchiolitis during the 6th and the 7th month of life and a
3rd episode of bronchiolitis complicated with pneumonia during the 8th
month of life. When admitted for the 3rd episode, she presented an oxygen
saturation of 91% in ambient air. Thoracic ultrasounds oriented the diagnosis
towards a diaphragmatic hernia, confirmed through barium swallow and
barium enema. The surgical treatment of the hernia determined the resolution
of respiratory symptoms. Unfavourable clinical course, despite correct
treatment in both cases required additional investigations which finally led
to the correct diagnosis and treatment.
Conclusions: For the differential diagnosis of non-responsive bronchial
obstruction in children, one must think to digestive diseases. Ultrasound was
the elective non-invasive method in diagnosing our cases.
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Bronchial Hyperresponsiveness in Children with Suggestive
Asthma Symptoms
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Background: To describe the accuracy of bronchial challenge tests
(methacholine and manitol) to measure bronchial hyperresponsiveness in
a group of pediatric patients with suggestive symptoms of asthma.
Methods: We selected 27 patients who attended consecutively to our
outpatient clinic complaining of 1 or 2 symptoms of asthma. They showed
a normal baseline spirometry and a negative bronchodilator test. All of them
underwent unspecific bronchial provocation challenges. Methacholine was
performed using the tidal volumes technique and a PC20 8 mg/mL was
considered positive. Dry-powder manitol (Osmohale TM) was administered
according to the manufacturer’s recommendations and the challenge was
considered positive if a PD15 635 mg resulted. We performed both tests
with an interval of at least 1 week. Asthma drugs were avoided during the 2
weeks previous to every challenge. Skin prick tests (SPT) to the most com-
mon aeroallergens were also performed.