Methods: All patients with asthma underwent immediate cutaneous testing including prick (epicutaneous) with a mix of Aspergillus species and if negative, intradermal at 1000 PNU/mL, Aspergillus fumigatus (Af). Sera were analyzed for total IgE (elevated is ≥417 kU/L) by Phadia ImmunoCap, anti-Af IgE and anti-Af IgG (ABPA range ≥ 2.0) ELISA, and precipitating antibodies. HRCT of the lungs was ordered next if serology was positive (diagnostic criteria for ABPA required total IgE ≥ 417 kU/L and both anti-Af IgE and IgG ≥ 2.0 compared to sera from skin test + patients with asthma without ABPA). To avoid bias from patients examined by the author, data were compared using screening from 5 other faculty in the same clinic.
Results: From 2000 to 2010, 864 skin test + patients underwent serologic testing for ABPA from which 81 (9.4%) were diagnostic for ABPA, and in this group, precipitins were positive in 42/81. To address referral bias in screened patients of the author, diagnostic criteria were positive in 49/208 (23.5%) patients of the author versus 32/656 (4.8%) of other allergy-immunology faculty. In addition, some 74/884 (8.6%) patients had total IgE ≥ 417 kU/L and either anti-Af IgE or IgG ≥ 2.0, implying an overall at risk for ABPA population of 155/864 (17.9%). The highest total IgE recorded in a non-ABPA patient with asthma was 192,100 kU/L.
Conclusions: Using total IgE and ELISA determinations to discriminate ABPA from skin test + asthma sera, 9.4% of patients had diagnostic evidence for APBA. Using data from faculty, presumably with less referral bias than the author, results in 4.8% patients with classic diagnostic criteria. This rate conservatively translates into a minimum of approximately 1.2% of patients with persistent asthma having APBA in the upper Midwestern US. The combination of elevated total IgE and precipitins but not elevated anti-Af IgE or IgG in this population has little/no value in diagnosis.

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Sleep-disordered Breathing in Obese and Eutrophic Adolescents, Asthmatics and not Asthmatics, in the Hospital Infantil of Mexico Federico Gómez

Alexander Morales, MD. *Immunology and allergy, Distrito Federal, Mexico.*
Background: Sleep-disordered breathing (SDB) has been studied in obese adults but there are few studies on adolescents. This study analyzed the frequency of SDB in obese adolescents and controls with and without asthma.
Methods: A cross-sectional comparative study, 27 obese adolescents 10 to 18 years old with body mass index (BMI) ≥ 95th percentile, of whom 17 (43%) had mild intermittent asthma (MIA) according to GINA 2005 guidelines and 23 (57%) without asthma, plus a group of 20 eutrophics adolescents (BMI = percentile 50th–84th), 50% (n = 10) with MIA and 50% (n = 10) healthy. All patients underwent overnight polysomnography, primary snoring (PS) was diagnosed with recording of snoring and apnea/hypopnea index (AHI) <1 and sleep apnea /hypopnea syndrome (SAHS) with an AHI ≥ 1 plus oxygen desaturations >4% baseline, bradycardia or tachycardia. We obtained measures of central tendency, dispersion and t student test for different groups.
Results: In obese adolescents with and without asthma SAHS was found in 72.5% (n = 29), PS was diagnosed in 20% (n = 8) and the subgroup analysis of obese show that same number of asthmatic and non asthmatic had SAHS (70.5%, 74%, respectively). The subgroup analysis of asthmatics and healthy eutrophic had SAHS (60% (n = 6), 0% (n = 0) respectively. Globally AHI in the obese group was 2.05 ± 3.48 compared to healthy eutrophic (0.40 ± 0.26) with $P = 0.0016$, significant differences were obtained in the analysis of subgroups: the IAH in obese adolescents with asthma (3.41 ± 3.47) and obese without asthma (2.60 ± 2.55) with $P = 0.7017$. In the eutrophic group differences there were significant differences: eutrophic asthmatics (IAH: 2.15 ± 0.26) and 0.40 ± 0.26 healthy eutrophic $P = 0.0047$.
Conclusions: SDB is more common in obese adolescents. In eutrophic asthmatic adolescents SAHS was more frequent than in healthy, probably by the presence of co-morbidities such as rhinitis, hypertrophy of tonsils and all patients were classified as MIA. Adolescents who are obese have an increased risk of SDB compared with the group of healthy adolescents.

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Dyspnea in Chronic Fatigue Syndrome (CFS): Comparison of Two Prospective Cross-sectional Studies

Murugan Ravindran, MBBS,[1] Oluwatoyin Adewuyi, MS,[1] Yin Zheng, MS,[1] Uyenphuong Le, MD,[2] Christian Timbol, MS,[1] Samantha Merck, BA,[3] Rania Esteitie, MD,[1] Michelle Cooney, RT,[4] Charles Read, MD,[4] and James Baraniuk, MD[1]. [1]*Medicine-Section of Rheumatology, Allergy, and Immunology, Georgetown University, Washington, DC;* [2]*Section of Rheumatology, Allergy and Immunology, Medicine, Washington, DC;* [3]*Medicine, Section of Rheumatology, Allergy and Immunology, Washington, DC;* [4]*Division of Pulmonary, Critical Care and Sleep Medicine, Georgetown University, Washington, DC.*
Background: Chronic Fatigue Syndrome (CFS) subjects have many systemic complaints including shortness of breath. Dyspnea was compared in two CFS and control cohorts to characterize potential pathophysiological mechanisms.
Methods: Cohort 1 of 257 CFS and 456 control subjects were compared using the Medical Research Council chronic Dyspnea Scale (MRC Score; range 0–5). Cohort 2 of 106 CFS and 90 controls answered a Dyspnea Severity Score (range 0–20) adapted from the MRC Score. Subsets of both cohorts completed CFS Severity Scores, fatigue, quality of life, and systemic complaints questionnaires. Cohort 2 also responded to other Dyspnea, affective and anxiety instruments. A subset had pulmonary function and total lung capacity (TLC) measurements.
Results: MRC Scores were equivalent for females and males in Cohort 1 CFS (1.92 [1.72-2.16]; mean [95% confidence interval]) and controls (0.31 [0.23-0.39]; $P < 0.0001$ by 2-tailed, unpaired Student's t tests with Bonferroni corrections). Receiver-operator curves identified 2 as the threshold for positive MRC Scores in Cohort 1. This indicated 54% of CFS, but only 3% of controls, had significant Dyspnea. In Cohort 2, the threshold Dyspnea Severity Score of 4 indicated shortness of breath in 67% of CFS and 23% of these controls. Cohort 2 Dyspnea Scores were higher for CFS (7.80 [6.60-9.00]) than controls (2.40 [1.60-3.20]; $P < 0.0001$). CFS had significantly worse fatigue, other CFS defining criteria and quality of life compared to controls. Although CFS had worse depressive affect and anxiety scores, only the controls showed correlations with Dyspnea Score. Pulmonary function was normal in CFS, but Borg scores and sensations of chest pain and dizziness were significantly greater during testing than controls. TLC was normal except for 2 of 16 CFS who had hyperinflation. A general linear model of Cohort 2 CFS responses linked Dyspnea Scores with rapid heart rate, chest pain and dizziness.
Conclusions: Sensory hypersensitivity without airflow limitation contributed to Dyspnea in CFS. Correlates of Dyspnea in controls were distinct from CFS suggesting different mechanisms.

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Incidence of Allergy in Patients With Benign Lesions of the Vocal Cords: Preliminary Report

Hulya Eyigor, MD,[1] Ustun Osma, MD,[1] Arzu Didem Yalcin, MD,[2] Mustafa Deniz Yilmaz, MD,[1] and Irfan Pirtik, MD[1]. [1]*ENT Head and Neck Surgery, Antalya Training and Research Hospital, Antalya, Turkey;* [2]*Allergology and Clinical Immunology Unit, Antalya Education and Training Hospital, Antalya, Turkey.*
Background: Allergic inflammation commonly affects the upper and lower airways concurrently. Although allergic nasal and pulmonary effects have been well described, laryngeal effects are not well understood. In this study we investigated the incidence of allergy in patients with benign lesions of the vocal cords and types of allergens causing these reactions.
Methods: The study was approved by the local ethics committee, and written consent was obtained from all patients. A questionnaire made by the investigators taking the latest literature data into consideration were used during the study. Laryngeal examination was done with videolaryngostroboscopy and

the lesions of each patients was recorded. Serum IgE levels and eosinophil levels were evaluated in all patients. All assays were carried out in duplicate. Skin prick tests on the forearm were performed in all patients using standardized latex extract containing high ammonia natural rubber latex, and a full set of 35 common. In addition, venom SPT was performed on one patient based on the subject's clinical history. Positive tests were counted as wheals of 3 mm in diameter after 20 minutes. Commercial extracts used were manufactured by Alyostal ST-IR. None of intradermal tests were performed.

Results: The group of 30 patients included 10 male and 20 female subjects with vocal cord pathology, having a mean age of 39.87 years. Sixteen (53.3%) patients had vocal polyp, 10 (33.3%) had nodule, 4 (13.3%) had Reinke edema. The mean IgE levels was 133.73 IU/mL, and mean eosinophil levels was 10,728.3. Dermal prick tests were found to be positive in 66.7% of the patients): The most common allergen was mite (53.3%) and grass pollen (52.3%).

Conclusions: In conclusion skin Prick tests were found to be highy positive in patients with bening lesions of vocal cords compared to normal population. Thus we can speculate that allergy may play a role in pathopysiology of these lesions. Further research is needed to identify the underlying pathways mediating the laryngeal response to allergy so that improved diagnostic and therapeutic techniques can be developed.

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Eechocardiographic Findings in Obese Adolescents with and without Asthma

Lizette Montejano-Elías, MD. *Hospital Infantil de México Federico Gómez, Distrito Federal, Mexico.*

Background: To detect echocardiographic alterations in the diameter of the aorta in relation to the diameter and ventricular volume in obese adolescents with or without intermittent asthma as well as in eutrophic adolescents with or without asthma.

Methods: Cross-sectional, prospective study in 10 to 17 year old adolescents. They were stratified into 4 groups based on the intermittent asthma diagnosis (GINA classification) and in the Body Mass Index [BMI] (Obesity: BMI higher than the percentile 95%; eutrophic: BMI percentile 10 to 85% according to CDC). Anthropometry and echocardiogram tests were done on all adolescents. Measures of central tendency were obtained (mean and 95% confidence interval [CI]) and data were analyzed through corrected ANOVA post HOC.

Results: One hundred and ninety-four subjects were studied and divided into 4 groups: obese with intermittent asthma (OA) [N = 72], obese without asthma (OnA) [N = 73], eutrophics with intermittent asthma (EA) [N = 22], eutrophics without asthma (EnA) [N = 27]. Expressing the mean values and the 95% CI, we obtained the relation of the aorta with the left ventricular diastolic diameter indexed to the body surface (millimeters [mm]) in OA = 1.105 (1.047–1.164), OnA = 1.130 (1.06–1.192), EA = 0.921 (0.885–0.988), EnA = 0.967 (0.873–1.061) [$P < 0.05$ EA vs OA y OnA]. For the aorta in relation to the left ventricular diastolic volume in mm/milliliters [mL] the values were: OA = 0.648, (0.624–0.673), OnA = 0.645 (0.623–0.666), EA = 0.649 (0.620–0.679), EnA = 0.650 (0.615–0.684) [$P > 0.05$]. The aorta values in relation to the stroke volume [mm/mL] were: AO = 0.573 (0.530–0.617), OnA = 0.553 (0.511–0.594), EA = 0.596 (0.526–0.666), EnA = 0.595 (0.525–0.665) [$P > 0.05$].

Conclusions: The diameter of the aorta in relation to the left ventricular diastolic diameter was lower in eutrophic adolescents with intermittent asthma. There was no difference in the diameter of the aorta of the obese adolescents with and without intermittent asthma.

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Asthma Prevalence and Body Mass Index in Children

Olf Herbarth,[1] Matthias Richter,[2] and Thomas Richter[3]. [1]*Environmental Medicine and Hygiene, Faculty of Medicine, University of Leipzig, Leipzig, Germany;* [2]*Helmholtz-Center for Environmental Research, Leipzig, Germany;* [3]*St. Georg Hospital, Leipzig, Germany.*

Background: Overweight seems to be a growing problem associated with diseases which are increase during the last decades. As an example both the BMI (Body Mass Index) and the asthma prevalence are increasing. The question is whether a link exists between these changes or whether the increase is independent of each other.

Methods: In the frame of a longitudinal repeated cross-sectional epidemiological study 4925 children in total have been medical checked up. A questionnaire was filled out by the parents. Among other things data were gathered concerning anamnesis, physical measurements, and physician diagnosed diseases, like asthma. Describing the overweight in children's age until 15 years the BMI was divided in percentiles <10%, 10 to 25%, 25 to 75%, 75 to 90%, >90% respectively >97%. The full data set was available for 3946 children (80.1% of all participants).

Results: Descriptive: The lifetime prevalence of asthma was 7.1% (age group until 15 years). The BMI was for the overweight group of 6/8/15 year old kids; 18.1/20.1/24.5 kg/m^2 and in the adiposity group 20.2/22.4/27.7 kg/m^2 respectively. Frequent air way infections and parental predisposition enhance the risk for asthma (4.1 vs 10.9%); boys are more affected than girls (8.1 vs 6.1%). Starting with the 10%-BMI-percentile the asthma prevalence increases using the above mentioned intervals from 3.6% up to 8.3% for children with overweight (>90%-BMI-percentile). Analytical: The logistic regression adjusted for relevant confounders (gender, smoking and passive smoking, parental predisposition, pets (like cats), duration of breastfeeding, socioeconomic status) confirms the descriptive results. The BMI dependent adjusted Odds Ratio (aOR) (range) for asthma was 1.6 (95% CI, 1.0-2.7; $P = 0.048$).

Conclusions: The results clearly show that within the group of higher BMI more asthma will detected. Contrary to other studies this study may not confirm that the dependence on asthma from the BMI is bimodal since no higher asthma prevalence was observed in the lower and lowest BMI classes. Up to now this pilot study does not answer the question about the underlying processes.

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Evaluation and Comparison of Lung Volumes and Capacities in a Group of Morbid Obese, Obese and Eutrophic Adolescents

Jeannette Mendiola Marin, MD. *Allergy and Immunology, Instituto Mexicano del Seguro Social, Mexico City, Mexico.*

Background: Obesity is a major health issue in the world. It is associated with a range of adverse consequences and its prevalence appears to be increasing among children and adolescents. The effects of ventilatory function have been widely studied in adults but there are scarce studies in children and even more, in specific population as inmorbid obese adolescents. Knowledge of early complications on the lung by pulmonary function tests allow the development of new management strategies aimed at the sporting activity in patients with morbid obesity.

Objective: To measure and compare pulmonary function tests in morbid obese, obese and eutrophic.

Methods: Transversal prospective protocol, in a group of morbidly obese, obese and eutrophic adolescents, aged between 11 and 17 years, divided into 3 groups: 1) Eutrophic adolescents (BMI < p85); 2) obese adolescents (BMI > p95 and <99); and 3) Adolescents with morbid obesity (BMI > 35 or BMI > P99). All of them underwent complete medical history, measurements and pulmonary function tests (plethysmography) using a Sensor Medics VMAX plethysmograph.

Results: We used descriptive stadistics, measurement of standar deviation, standar error, confidence interval95%, we analized in groups using analysis of variance (ANOVA) with a Tukey post hoc analysis. Significance was taken as $P < 0.05$ for all tests. Funtional Residual Capacity (FRC) and Expiratory Reserve Volume (ERV) decrease sharply comparing the 3 groups: FRC $P <$ .032 eutrophic versus obese and $P <$ .031 eutrophic versus morbid obeses. ERV $P <$ .001 eutrophic versus obese and $P <$ .003 eutrophic versus morbid