

## 126. ALPHA-1-ANTITRYPSIN DEFICIENCY

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**Introduction:** Alpha-1-antitrypsin deficiency (A1AD) is a hereditary disorder, caused by insufficiency or lack of hepatic enzyme alpha-1-antitrypsin, which blocks neutrophil elastase. A1AD could affect any organs, but mostly the respiratory system is involved. A1AD pulmonary manifestations are panacinar emphysema and COPD. Usually emphysema appears at the age of 30 – 40 years old, in smokers A1AD subjects, but also can occurred at 50-60 years old in A1AD patients how have never smoked.

**Clinical Case:** 41 years old man, current smoker (smoker index - 30 packs/year), was admitted for dyspnea at rest, cough with mucopurulent sputum, 38°C fever, loss of appetite and asthenia. At the same time he mentioned that he has experienced a progressive dyspnea during the last four years. Physical exam revealed: low body weight (BMI 18.5), tachycardia (HR-130 beats/min), tachypnea (RR-26/min) and SaO<sub>2</sub>-91% (FiO<sub>2</sub>-21%). Signs of lung hyperinflation as well as signs of pulmonary consolidation were found. Laboratory data highlighted leukocytosis up to 16x10<sup>9</sup>/l and increased ESR 52 mm/hour. On ECG - signs of pulmonary cord were attested. The chest X ray revealed bilateral opacities in S9-S10, and radiographic signs of pulmonary hyperinflation. Pulmonary function tests shown obstructive abnormalities (FVC-38%, VEMS-20%, VEMS/FVC -56%) with hyperinflation (RV-188%) and a decreased gas transfer factor (DLCO-27%). Chest CT scan revealed diffuse panlobular emphysema and apical areas of centrilobular emphysema, thickening of the bronchial walls, and basal areas of pulmonary consolidation in both lungs. The serum level of alpha-1-antitrypsin was 0.27 g/l (normal range 0.9 to 2 g/l).

**Results:** In 2003, ERS/ATS has published the guidelines on the diagnosis and management of the A1AD. The groups of patients in whom A1AD testing is recommended are young adults with persistent bronchial obstruction syndrome, emphysema, COPD, asthma and asymptomatic individuals with persistent bronchial obstruction or those with such risk factors as smoking or occupational exposure.

**Conclusion:** A1AD is an underdiagnosed disease in patients with chronic obstructive pulmonary disease. The gold standard for A1AD diagnosis is the genetic test (determining the pathogenic version of the gene encoding alpha-1-antitrypsin - SERPINA1), but for screening purpose, methods of quantitative assessment of serum levels of alpha-1-antitrypsin may be useful.

**Keywords:** Alpha-1-antitrypsin deficiency, chronic obstructive pulmonary disease, screening

## 127. SWEATING DISORDERS IN PATIENTS WITH CHRONIC MIGRAINE AND CHRONIC LOW BACK PAIN

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**Introduction:** Sweating is a healthy natural physiological phenomenon, with an essential role in thermoregulation and detoxification processes of the body. But there exist such phenomena as sweating disorders which include: hypohidrosis, anhidrosis and hyperhidrosis.

**Purpose and objectives:** The study of sweating disorders in patients with chronic migraine and chronic low back pain. (1) Evaluation of perspiration and sweating disorders in these patients. (2) Determination of hyperhidrosis action on quality of life. (3) Identification of anxiety and depression in chronic pain patients with hyperhidrosis. (4) Comparing sweating in higher humidity region for patients with chronic migraine, chronic low back pain and control group.

**Materials and methods:** The study was conducted on a total of 40 patients aged between 20-65 years, of which 20 patients (women) with chronic migraine (group I) and 20 patients (10 men and 10 women) with chronic low back pain (group II) and 10 healthy subjects aged between 25-58

years (group III). The study consisted of two parts, the first part included patients completing the questionnaires, based on their own subjective opinions. In the second study was conducted objectively, sweat gland function was examined by measuring skin moisture with a special device by "ARAM Huvis" in the following regions: center of the palm, foot, frontal region, left temple and right axillary and popliteal fossa, sternum, abdomen, lumbar and coccygeal regions.

**Results:** Measuring the skin humidity was observed that these patients have a higher skin humidity than healthy group in all measured regions. In patients with chronic migraine the degree of skin moisture is higher in the frontal region and foot, while those with chronic low back pain have higher skin humidity in the axillary and popliteal fossa and lumbar region. Presented differences are statistically proven to  $P < 0.05$ . Studying also the questionnaires Beck of depression and Spilberger of anxiety were obtained the following results: the value of reactive anxiety in-group I was  $29.95 \pm 1.42$  in-group II was  $22.40 \pm 1.16$ , being statistically significantly higher in the group with chronic migraine ( $P = 0.002$  \*\*). In group III reactive anxiety value was  $1.56 \pm 1.18$ , which differs from group I and II, demonstrated statistically (between group III and II,  $P = 0.000$  \*\*\*, and between group III and I,  $P = 0.001$  \*\*). Anxiety personality also presented significant statistical differences in group I  $34.25 \pm 2.2$  compared with group II ( $P = 0.000$  \*\*\*) and also between Group I and III, group III value was  $21.30 \pm 2.19$  ( $P = 0.000$  \*\*\*). Between group I and II statistical difference there is not as  $P > 0.05$ . Studying the questionnaire Beck we assessed the level of depression and found that there are significant statistical differences here between groups I-III ( $P = 0.000$  \*\*\*) and II-III ( $P = 0.000$  \*\*\*), the results were  $9.65 \pm 0.72$  versus group I  $8.95 \pm 0.60$  versus group II  $0.62$  versus  $4.60$ . Between group I and II statistical difference there is not as  $P > 0.05$ .

**Conclusions:** Our study confirmed certainly that patients with chronic migraine and chronic low back pain manifest a higher degree of skin moisture than healthy people group, there existing significant statistical differences. Depression and anxiety scales analysis noted that patients with migraine and low back pain are more anxious and the depressive syndrome is more pronounced compared to the control group.

**Keywords:** Hyperhidrosis, chronic migraine, chronic low back pain

## 128. HEALTHY SLEEP FIGHT AGAINST OBESITY

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**Introduction:** Sleep is a basic need of the body. In Europe the duration of sleep for adult person (18-55 years) is 7 hours, but more than third of adults sleep less than 6 hours per night. Several studies have shown an epidemiological association between short sleep duration and high body mass index (BMI) associated with obesity. In case when the sleep time is less than 5 hours at night, the risk of obesity increases by 60%. This impact is much greater than that of food intake or lack of physical activity.

**Purpose and objectives:** We evaluated the correlation between the sleep duration and body mass index, depended of the sex and age.

**Materials and methods:** Survey was attended by 80 people, aged 15-18 years. Volunteers were selected from two high schools: "Gheorghe Asachi" and, "Spiru Haret" Chișinău, Moldova. The questionnaire issued to participants consisted of several parts: name, age, sex, anthropometric data (the waist circumference, height, BMI, sleep time (in hour), the information about food (number of meals) and health problems, information about the parents of participants (body weight, height, BMI, age). In dependence of the duration of sleeping participants were divided into two groups: group A with sleep duration  $\leq 8$  hours and group B with sleep duration  $> 9$  hours. Statistical analysis was performed using standard Excel functions. To characterize obesity, body mass index (BMI) which is calculated by dividing weight (in kg) by height (in meters) squared was used.

**Results:** Adolescents included in the study have had a mean age of  $16.38 \pm 0.5$  years, 33 (41%) boys and 47 (58%) girls. Group A have included 43 (53%) teenagers and group B 19 - (23%) participants. In group A and B, the average age of boys and girls has been comparable. The average sleep duration has