PLEURO-PULMONARY COMPLICATIONS IN PATIENTS WITH CYSTIC FIBROSIS IN RELATION WITH BACTERIAL ETIOLOGY OF LUNG INFECTIONS

Introduction. Cystic fibrosis (CF) is a hereditary pathology with autosomal-recessive transmission characterized by obstructive chronic pneumopathy, malabsorption and malnutrition syndromes, with progressive chronic evolution, and with varying prevalence.

Genetic researchers have discovered more than 2000 mutations in the CFTR gene, and the most common mutation is F508del identified in 80% CF patients. The homozygous genotype of the F508del mutation is responsible for the most severe clinical forms with major risks of pleuropulmonary complications, with high fatal potential, which accelerate the destructive processes of the pulmonary parenchyma in association with multidrogresistant germs, which contribute to the development of pulmonary complications.

Aim. Evaluation of pleural and pulmonary complications in CF patients with lung infections in relation with its bacterial etiology.

Methods. It is a study of 80 patients with CF, hospitalized and assessed clinical and paraclinical in the Cystic Fibrosis Center and in the Clinic of Pediatric Surgery, Orthopedics and Anesthesiology, for 20 years.

The positive diagnosis of CF has been confirmed by the sweat test and molecular DNA research to determine CFTR mutation. The imaging exam included pulmonary radiography, computed tomography with angiography.

Results. The group had characteristics: mean age 8,79±0.96 years, with age extremes 1 month - 38 years, distribution by sex 1:1, and average age of CF diagnosis – 3,61±0,88 years, with variations in the neonatal period up to the age of 34 years.

The progressive evolution of the pulmonary pathological process was determined by resistant germs such as *Ps.aeruginosa* (62.5%), *S.aureus* (55%), *St.maltophilia*, *B.cepacia complex*.

Bronchiectasis (62,5% patients) in CF patients was predominantly localized in upper lobes (50%) and predominant sacciforms bronchiectasis (47,5%), often with fluid levels (18,7%).

The dilatation of the hills due to infectious adenopathy was determined in ¼ patients with CF, and the pulmonary trunk size increase in 18,7% of cases, which indicate the installation of pulmonary hypertension, pulmonary cord.

During surveillance, 25% CF patients with lung infections were diagnosed with pleurisy, which required thoracentesis in 8,7% of cases. Lung empyema was a serious complication in these patients, confirmed in 7,5% of cases. Pulmonary destructions (27,5% cases) developed in CF patients with exacerbations of *S.aureus* lung infections, *Ps.aeruginosa* and *B.cepacia*. 17,5% of CF patients develop pneumothorax, which occurs as a result of pulmonary tissue rupture, which is a serious complication with danger to the patient's life.

Conclusions. Pulmonary syndromes in patients with cystic fibrosis evolve progressively, with the risk of death by severe pleuro-pulmonary complications, which are caused by aggressive *Ps.aeruginosa* infections, by pulmonary alveolar affection, abscesses, pleurisy. The prognosis of CF with bronchopulmonary involvement is related to the degree of respiratory lesions, the character of pleuro-pulmonary complications, the presence of extrapulmonary syndromes.

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Ilia Catsap

PREVALENCE OF ANEMIA AND IRON DEFICIENCY BETWEEN THE AGES OF 18 AND 36 MONTHS, A STUDY OF 244 INFANTS

"Clalit" Health Services (Israel)

Background: The prevalence of Microcyte Anemia, which is mostly caused by iron deficiency, has been extensively studied in a mammalian group aged 1 to 2 years.

In a work performed by "Clalit" Health Services in the population of infants aged 9 to 18 months, anemia was found at an average frequency of 11.5%, with no decrease in toward the age of 18 months. The prevalence of the non-Jewish population was twice as high as among Jewish-born infants.

Until today, there is insufficient information about the prevalence of anemia and iron deficiency in reservoirs (low item values) between the ages of 18 and 36 months in Israel and abroad.

Iron deficiency in young ages has been shown to cause cognitive impairment, sometimes with irreversible injury. Therefore, locating a condition of iron deficiency at a young age and providing iron-based preventive treatment is essential for the children›s future.

The accepted recommendations in Israel are to provide iron-powered treatment for all infants from 4 months to 1 year of age and to perform a blood count at the age of one year in order to locate babies with anemia and recommend iron treatment. The reduction in the percentage of infants with anemia at one year was accepted as one of the quality indicators of the health services in recognition of the importance of the issue.

Purpose of the Thesis: The purpose of the present work Is to assess the prevalence of iron deficiency anemia in an age group of 18 to 36 months with the intention of formulating recommendations for further screening at this age.

The study population: Clinical data and blood counts of 244 mammals aged 18 to 36 months were collected from the pool of children treated in urban and rural clinics in the Northern District of "Clalit" Health Services.

For each investigated, a questionnaire was completed that included demographic details including: origin, age, and years of schooling of the mother.

Data were also collected on anamnesis of carriers of thalassemia in the family, birth weight, place of the child in the family, and renewal of lactation as exclusive food in the first year of life. Anamnesis of iron therapy was also reported beyond routine iron administration as prophylaxis in the first year of life. In all children, a complete blood count and feritin level were performed.

Results: A total of 244 children aged 18-36 months were enrolled in the study with an average age of 26 +- 5 months. 52% of the babies are of Jewish origin and 48% of the non-Jewish sector. 55% of the respondents were boys. 16.5% of children aged 18 to 36 months had hemoglobin values below 10.9 grams, which is the limit for anemia at these ages. The most common among children of non-Jewish origin is 19.8%, compared with 13% among children of Jewish origin (the difference is not significant).

In contrast, 31% of infants, especially infants of Arab origin (38% vs. 23% P = 0.013) showed low feritin values (12> ng / dl) and / or low hemoglobin values. As a result, we can conclude that in both populations, but mainly in the Arab population, the number of children with IRON DEFICIENCY is twice the number of children with low hemoglobin values.

These data are consistent with the fact that iron deficiency anemia is more common in the Arab population than in the Jewish population, and that anemia is actually the tip of the iceberg, and a double percentage of infants without anemia are feritin, especially in Arab-born infants. Socioeconomic background, mother›s age, multiple births and months of breastfeeding as exclusive food. Also had an effect on the prevalence of anemia in these ages, but in this study all of these data showed no differences between the groups.

The age group with a particularly high percentage of anemia and iron deficiency in the reservoirs is the 24 to 30 month age group, compared with the younger or older age group (39% vs. 26% and 22%, respectively, P = 0.042).

Discussion and Summary: Since the rate of iron deficiency anemia is unchanged and even worsens from the age of 18 months to the age of 36 months, we believe that the recommendations of the Ministry of Health should be changed to provide preventive iron at least until the age of two years.

In addition, the nutritional composition of infants aged 1 to 3 years should be improved, including the introduction of iron fortified foods. It may be necessary to perform a blood count routinely at the age of two years or the age of one and a half years in order to identify anemic babies and instruct the parents about both proper nutrition and preventive / therapeutic iron as needed.

Special attention should be given to the population of infants of non-Jewish origin. Of course the implementation of similar works in additional areas in the country can confirm the findings of this work.

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Adriana Cosmescu[1], Carmen Oltean[2], Dana Anton-Păduraru[1], Adorata Coman[1]

ALGORITM DE DIAGNOSTIC AL HIPERGLICEMIEI LA COPIL

[1]Universitatea de Medicină şi Farmacie "Grigore T.Popa" (Iaşi, România)
[2]Spitalul clinic de urgentă pentru copii "Sf.Maria" (Iaşi, România)

Cuvinte-cheie : hiperglicemie, copil, diabet zaharat

Definim hiperglicemia prin creşterea glicemiei a jeun peste 110 mg/dl sau printr-o glicemie oricand in cursul zilei peste 140 mg/dl. În practica pediatrică, aceste valori pot fi cauzate de anumite medicamente, de stres sau pun problema apariţiei diabetului zaharat. Dintre medicamentele care pot determina hiperglicemie menţionăm steroizii, tiazidele, hormonul de creştere şi unele antipsihotice. Acestea din urmă au fost asociate cu o incidenţă crescută a diabetului de tip 2 si cu înrăutăţirea controlului metabolic în diabetul de tip 1.

Hiperglicemia de stres poate avea cauze minore, spre exemplu o infecţie de tract respirator superior, sau cauze severe, chirurgicale. Hiperglicemia din infecţiile minore poate anunţa apariţia unui diabet de tip 1 sau diabet MODY şi trebuie investigată ulterior.

Dacă valorile glicemiei sunt peste 126 mg/dl a jeun şi peste 200 mg/dl în cursul zilei, se stabileşte diagnosticul de diabet zaharat. În peste 90% din cazuri, în copilărie şi adolescenţă se diagnostichează diabetul de tip 1, pe baza simptomelor tipice si prin confirmarea patogeniei autoimune, respectiv a markerilor de autoimunitate. Există şi posibilitatea