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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ALGORITM DE DIAGNOSTIC AL HIPERGLICEMIEI LA COPIL

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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

unui diabet secundar asociat anumitor afectiuni, cum ar fi fibroza chistică, talasemia, feocromocitomul sau afecțiuni genetice.

Când valorile glicemiei a jeun sunt între 100-125 mg/dl, pentru a diferenția diabetul zaharat de tip 2 de un diabet monogenic sau de un prediabet, se recomandă efectuarea testului oral de toleranță la glucoză asociat cu determinarea hemoglobinei glicozilate A1c, a anticorpilor anticelule insulare (ICA), a anticorpilor antiinsulinici şi a peptidului C.

În prezent, se remarcă o crestere a incidenței diabetului zaharat de tip 2 la populatia pediatrică, şi anume la pacientii cu obezitate şi istoric familial pozitiv de obezitate şi/sau diabet de tip 2, cu valori normale sau crescute ale peptidului C şi fără autoanticorpi prezenți. Diabetul de tip MODY apare la 2-3,5 % din cazurile de diabet zaharat, copiii având un fenotip extrem de variabil, nu prezinta autoanticorpi, iar transmiterea autosomal dominanta este demonstrata de istoricul familial de diabet la 2-3 generații.

În concluzie, hiperglicemia la copil pune probleme de diagostic diferențial între debutul diabetului zaharat, un diabet secundar, o hiperglicemie indusa medicamentos sau o hiperglicemie de stres.

DIAGNOSTIC ALGORITHM OF HYPERGLYCEMIA IN CHILDREN

Key words: hyperglycemia, child, diabetes mellitus

Hyperglycemia is defined as an increase of the fasting blood glucose level above 110 mg/dl or by random blood glucose level above 140 mg/dl . In pediatric practice, these values may be caused by certain medications, by stress or they may be an indication of diabetes mellitus. Here are some of the medications that may cause hyperglycemia: steroids, thiazides, growth hormone and some antipsychotics. The latter were associated with an increased incidence of type 2 diabetes and with poor metabolic control in type 1 diabetes.

Hyperglycemia caused by stress may have minor causes, for instance an upper respiratory tract infection, or severe surgical causes. Hyperglycemia caused by minor infections may be the precursor of type 1 diabetes or of MODY diabetes and it should be further and more thoroughly analyzed.

When the fasting blood glucose levels exceed 126 mg/dl and when the blood glucose levels are over 200 mg/dl at any time during the day, the diabetes mellitus diagnosis is set. Type 1 diabetes is diagnosed during childhood and adolescence in over 90% of the cases, based on specific symptoms and when confirmed by autoimmune pathogenicity, i.e. autoimmunity markers. There is also the possibility of secondary diabetes associated with certain conditions such as cystic fibrosis, thalassemia, pheochromocytoma or genetic disorders.

When fasting blood glucose levels are between 100-125 mg/dl, in order to distinguish type 2 diabetes from monogenic diabetes or from prediabetes, an oral glucose tolerance test is recommended together with the determination of glycosylated hemoglobin A1c, anti- islet cells (ICA), anti-insulin antibodies and peptide C.

Nowadays, there is an increase in the incidence of type 2 diabetes in the pediatric population, namely in patients with obesity and family history of obesity and/or type 2 diabetes, with normal or elevated C-peptide levels and no autoantibodies present. MODY diabetes occurs in 2-3.5% of the cases of diabetes, as children have a very variable phenotype, do not show autoantibodies, and dominant autosomal transmission is demonstrated by family history of diabetes in 2-3 generations.

To conclude with, hyperglycemia in children poses a differential diagnosis problem, as it is difficult to distinguish between the onset of diabetes mellitus, secondary diabetes, medication-induced hyperglycemia or stress-caused hyperglycemia.

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INSUFICIENȚA RESPIRATORIE ÎN DISPLAZIILE BRONHOPULMONARE LA COPII

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Cuvinte-cheie: insuficiență respiratorie, displazie bronhopulmonară, copii

Introducere: Sindromul de insuficiență respiratorie acută evoluează rapid, rezultă din incapacitatea sistemului respirator în asigurarea schimbului gazos adecvat între aerul alveolar şi capilarele pulmonare, în repaus şi la efort: hipoxemia – $P0_2$<60 mmHg, hipercapnia PC02>50 mmHg, acidoza respiratorie – pH-ul sangvin arterial < 7,2. Orice afecțiune a sistemului respirator sau diminuare a funcției pulmonare poate conduce la o insuficiență respiratorie la copii. În displazia bronhopulmonară (DBP), ca urmare a afectării extinse pulmonare, la diferite etape evolutive, se poate instala insuficiența respiratorie.