Conclusion Only one CDR developed for children with FN met all methodological standards and reached the highest level of evidence.

PS-090 HEREDITARY SPHEROCYTOSIS AND RED CELL INDICES MCHC, MCV, RDW

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Background Hereditary spherocytosis (HS) is a common inherited disorder that is characterised by anaemia, jaundice, and splenomegaly. Clinical severity is variable with most patients having a well-compensated hemolytic anaemia. The primary lesion in HS is loss of membrane surface area, leading to reduced deformability due to defects in the membrane proteins ankyrin, band 3, beta spectrin, alpha spectrin, or protein 4.2. Many isolated mutations have been identified in the genes encoding these membrane proteins; common hereditary spherocytosis-associated mutations have not been identified. The classic laboratory features of HS include minimal or no anaemia, reticulocytosis, an increased mean corpuscular haemoglobin concentration (MCHC), spherocytes on the peripheral blood smear, hyperbilirubinemia, and abnormal results on the osmotic fragility test.

Aim Of the study is to evaluate the role of MCV, MCHC as a screen test to diagnose spherocytosis

Methods In our study are included 60 subjects, 30 children with HS and 30 children-control groups. Our patients with anaemia, jaundice, and splenomegaly are diagnose with HS by incubated osmotic fragility test, performed after incubating RBCs for 18–24 h under sterile conditions at 37°C.

Results We found that 25% of pts. have mild HS, 20% moderate HS, 30% moderate to severe HS and 25% severe HS. In peripheral blood smear 7% of pts. had 0–5 spherocytes for field, 30% had 5–10 spherocytes for field and 63% had 10–15 spherocytes for field. 70% of pts. With HS have MCHC > 38%.

There are a positive correlation between MCHC and spherocytes in peripheral blood smear ($r = 0,898$, $p < 0,001$) and RDW ($r = 0,647$, $p < 0,001$), negative correlation between MCHC and MCV ($r = -0,437$ $p < 0,001$)

Conclusion The dedication of hiperdense erythrocyte today is used as a new tool in diagnosing HS. The determination of MCHC constantly growing with other red cell index, MCV < 80 fl, RDW > 15 obtained from an electronic cell counter usually is enough to suggest for HS.

Key Words Spherocytosis, MCHC, anaemia, children.

PS-091 DISPERSION OF THE QT AND QTC INTERVALS-EARLY MARKER OF ANTHRACYCLINE INDUCED CARDIOTOXICITY IN CHILDREN WITH MALIGNANT HEMOPATHIES

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Background Heart rhythm disorders are one of major adverse effects induced by myocardial anthracycline cardiotoxicity in

children with malignancies and that require early diagnosis for effective prevention.

Objectives To investigate the utility of the study of QT and QTc dispersion in children with malignancies treated with anthracyclines.

Methods patients: 40 patients (2–18 years) with malignant hemopathies, treated with anthracyclines. All patients were examined by clinical examen, ECG, Doppler echocardiography, the values of QT dispersion (difference between the maximum and minimum QT interval, manually measure the QT interval, on three successive cardiac cycles) and QT dispersion (Bazett's formula). Dispersion of QT and QTc interval in these patients was compared to similar values from 20 healthy children without cardiovascular history.

Results The increase of QT and QTc dispersion in patients comparative to the control lot, was revealed in 73% cases, usually in those which had a cumulative anthracyclines doses over 400 mg/m², with medium values of QTD: 53,33 ± 10,18 msec and QTcD: 66,28 ± 12,8 msec. The increased dispersion of QT and QTc intervals was highlight most frequently in cases with echocardiographycal signs of anthracyclines cardiotoxicity, even only diastolic dysfunction of left ventricle.

Conclusions The significant incidence of increasing the QT and QTc interval dispersion in patients who received treatment with anthracyclines and the correlation with cumulative anthracyclines doses and echocardiographic modifications, especially diastolic dysfunction, proves utility of systematic investigation of QT and QTc intervals dispersion in the full control in the therapy, as an earlier marker for cardiotoxicity of anthracyclines.

PS-092 NUTRITIONAL STATUS OF CHILDREN DIAGNOSED WITH ACUTE LYMPHOBLASTIC LEUKAEMIA AT THE CHILDREN CANCER CENTRE

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Background and aims Acute lymphoblastic leukaemia (ALL) is the most common malignancy among children. Malnutrition remains a major concern for paediatric oncologists. Although studies have shown that malnutrition can negatively affect treatment outcome, results are still controversial. This retrospective cohort study aims at determining the prevalence of malnutrition and its association with treatment outcome and infection among children with ALL treated at the Children Cancer Centre in Lebanon (CCCL).

Methods 108 children and adolescents diagnosed with ALL between April 2002 and May 2010 were enrolled in the study. Anthropometric data were collected from patient's medical record upon diagnosis, at 3 and 6 months, and at the end of treatment. Body mass index (BMI) was calculated for children ≥ 2 years while weight for height ratio was used for patients < 2 years. Patients were considered underweight, stunted, or wasted if their z-scores were < -2SD.

Results The prevalence of malnourished children was 27% at diagnosis and remained almost the same at the end of treatment. The odds ratio of having worse outcome in terms of relapse or death was higher among malnourished children with OR = 2.09, 95% CI = 0.3–13.4 and OR = 1.25 and 95% CI = 0.2–6.9 for death and relapse respectively. However this trend was