Conclusion: Though still within the physiological limits, HVF of preterm neonates with RDS decreases ICA & MCA blood flow. Further studies on larger scale are needed to reveal the correlation between high frequency ventilation, cerebral blood flow velocity and other organs blood flow.

Effect of Omega 3 fatty acid supplementation on Saudi children with Sickle cell anemia

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Background: Omega 3 fatty acids (Docosahexenoic acid DHA and eicosapentaenoic acid EPA) have abilities to decrease red blood cell aggregation and their adherence to the endothelium of blood vessels and also interfere with prothrombotic activity which all may lead to decrease vasoocclusive crisis and other complications. Accordingly reduced blood levels of omega-3 long chain polyunsaturated fatty acids (omega-3 LCPUFA) play a role in pathophysiology of sickle cell disease.

Objectives: This study was designed to evaluate the beneficial effect of omega -3 fatty acids (DHA, EPA) supplementations among children with sickle cell disease SETTING: The study was conducted in El Jeddani group Hospital, Jeddah, Saudi Arabia.

Patients and Methods: Thirty patients with sickle cell anemia, ranging between 8 and 15 years old, were enrolled in this study. Oral omega-3 fatty acid (DHA, EPA) supplementations were given to all cases for 6 months. and data including numbers of blood transfusion and numbers of days of school absence were collected. Complete blood count and unconjugated bilirubin were analyzed for all enrolled children. All patients were followed up during this period. Only 23 patients completed the study.

Results: Omega-3 fatty acids treatment significantly decreased vasoocclusive attacks among cases in comparison to pretreatment period from a median of 4.3 to 2.9 per year (P < 0.0001), numbers of blood transfusion significantly decreased (4.7% post supplementation compared with 16.6% pre-supplementation; P < 0.05) also there was significant decrease in numbers of school absence.

Conclusion: Omega-3 fatty acids could be used safely and effectively in children with sickle cell anemia.

Serum visfatin in sickle cell diseases: association to frequency of vaso-occlusive crises

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Background: Hypercoagulability in sickle cell disease (SCD) is multifactorial, involving abnormalities in platelet (PLT) function, thrombin generation, fibrinolysis and other multiple mechanisms. Visfatin; an adipocytokine with pro-inflammatory potential can exert negative impact on vascular endothelium in SCD.

Objectives: We aimed to evaluate association between serum visfatin level in SCD patients and frequency of vaso-occlusive (VOC) crises/year encountered in those patients.

Subjects and Methods: 16 sickle cell anemia (SCA) and 14 sickle cell- β plus-thalassemia pediatric patients were studied in steady state. Twenty age and sex matched healthy subjects as a control group were evaluated for serum visfatin level by ELISA.

Results: Hemoglobin (Hb) level was higher in control group than SCA group (p < 0.001), while total leucocytic count (TLC) and serum visfatin were higher in SCA group than control group (p = 0.02, < 0.001 respectively). Hb level and PLT count were higher in control group than Sickle- β- thalassemia group (p < 0.001, 0.04 respectively). Serum visfatin was higher in Sickle- β- thalassemia group than in control group (p < 0.001). Hb S %, serum visfatin and frequency of VOC crises/year were higher in SCA group than Sickle- β- thalassemia group (p = 0.002, < 0.001, 0.002 respectively). Serum visfatin was positively correlated with TLC, serum ferritin level and frequency of VOC crises/year (p = 0.005, 0.01, 0.03 respectively) in SCA group.

Conclusion: Serum visfatin is increased in SCD patients compared to healthy children and is associated to frequency of VOC crises; it can be used as useful predictive index for VOC crises occurrence and follow up in those patients.

Effect of estrogen receptor alpha polymorphism (IVS1-397 T>C) on type 1 diabetes mellitus in pubertal girls

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Background: Type 1 diabetes mellitus (T1DM) is considered as a multifactorial disease, whose etiology involves genetic predisposition as well as environmental factors that contribute to disease progression and pathogenesis. Estrogen might play an important role in pathogenesis of type 1 diabetes mellitus. A number of polymorphisms have been reported in the ER alpha gene which may be involved in disease pathogenesis.

Objective: was to assess the influence of IVS1-397 T>C Estrogen Receptor alpha genotypes on type1 diabetes mellitus in pubertal females.

Methods: This study was done on forty pubertal regularly menstruating girls less than 18 years with type 1 diabetes mellitus. Estrogen Receptor alpha variants were assessed in all subjects and correlated with both clinical and laboratory parameters in the studied cases.

Results: The study revealed that TC genotype was the most prevalent genotype of estrogen receptor. The TT genotype patients had younger age of onset of T1DM. The prevalence of systolic hypertension was highest in TT genotype patients, while the prevalence of diastolic hypertension was higher among CC genotype patients. The prevalence of obesity was less among CC genotype patients than TC and TT genotype patients. Also CC genotype patients had the least prevalence of microalbuminuria and had a better glycemic control than other genotypes.