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RENAL TUBULAR FUNCTION IN MINOR THALASSEMIA

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β - Thalassemia minor is a common heterozygous hemoglobinopathy that is characterized by both microcytosis and hypochromia. It has been postulated that low grade hemolysis, tubular iron deposition and toxins derived from erythrocytes might cause renal tubular damage in adult patients with β - thalassemia minor.

The aim of this study is to investigate the renal tubular function in children with β - thalassemia minor and to determine its possible harmful effects.

Methods:

The study was conducted on 50 children (22 male and 28 female) at the age of years (range 4-19 years) with β - Thalassemia minor. A control group was formed with 50 healthy children whose ages and sexes match those in the first group.

Blood and 24-hour urine samples were obtained for hematologic and biochemical analysis.

Results: There was statistically significant difference among the two groups in terms of the results of FE_{UA} (%), TPR (%), FE_k (%), GFR, Urine uric Acid, serum Mg ($P < 0/05$). But other significant signs of renal tubulopathy such as hypercalciuria, and tubular proteinuria (β_2 - microglobulinuria) were not seen.

Conclusion:

On the contrary of children with β - Thalassemia major, renal tubular dysfunction is not common in children with β - Thalassemia minor.

Also it suggested that in future studies to confirm renal tubular dysfunction should be considered specific test such as NAG measurement and specific parameter of oxidative stress such as urine zinc level (indirect evidence of oxidative stress).

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PROCALCITONIN AS EARLY MARKER IN UPPER URINARY TRACT INFECTION

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In order to establish the most reliable marker for distinguishing urinary tract infection, we recorded the clinical features and admission leukocyte count, ESR, CRP and procalcitonin in 80 children aged 2 months-10 years admitted with a first episode of UTI. Fifty children with mean age 4/89 and 30 children with mean age 5/20 were compared. ESR, WBC and PCT but no CRP were significantly higher in patients with upper UTI ($p < 0/0001$). PCT had the best performance (0/5 ng) with sensitivity, specificity and positive and negative predictive values of %63, %83/3, %87/8 and 56/4/1 respectively. PCT cut-off value 2 ng/ml also had sensitivity, specificity and positive and negative values of %50, %96/6, %96/2 and %53/7 respectively. PCT was more sensitive and specific for the diagnosis of upper versus lower urinary tract infection than CRP. Serum PCT is a better marker than CRP for early prediction of pyelonephritis in children with a first episode of UTI.

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PULSE CYCLOPHOSPHAMIDE THERAPY FOR STEROID-RESISTANT FOCAL SEGMENTAL GLOMERULOSCLEROSIS IN CHILDREN

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Background: In children, steroid-resistant nephritic syndrome due to focal segmental glomerulosclerosis (FSGS) is frequently a progressive condition resulting in end-stage renal disease (ESRD). We report the response of 25 patients with steroid-resistant FSGS to treatment with intravenous pulse cyclophosphamide. Seven patients had initial steroid resistance and eighteen patients had late steroid resistance.

Materials and Methods: All patients were treated with intravenous pulse cyclophosphamide at a dose of 20 mg/kg/month for 12 months. Peroral prednisolone was given at a dose of 60 mg/m²/day for 6 weeks followed by 40 mg/m² on alternate days for 6 weeks and then tapered over the next 6 weeks.