Hormone Research
in Paediatrics

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Abstracts

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hemoglobin level was found to be 12.2 g/dl. Genetic examination of our patient was performed, and C.653C>T(p.S218F)(p.Ser218Phe) hemizygous mutation was detected in the G6PD gene.

Conclusions: It should be kept in mind that G6PD deficiency may occur in diabetic individuals in the presence of severe anemia and hemolysis may develop with blood glucose regulation.

Key Words: hyperglycemia, anemia, glucose-6-phosphate dehydrogenase, diabetes mellitus

P2-160

HbA1C stability – is posting samples reliable?

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For the safe delivery of Paediatric Diabetes services at DBTH during the COVID pandemic a postal HbA1c service with patients collecting capillary blood samples to send to the laboratory for analysis was proposed. The aim of this pilot study was to assess stability of HbA1c at ambient temperature in capillary whole blood samples collected into Sarstedt Microvette EDTA tubes. Samples were analysed on the day of collection on the TOSOH G11 analyser and then re-assayed daily for up to 6 days to allow for postal delays. Acceptable stability was taken as a change of ≤4mmol/mol from the day of collection. The study indicates that a valid result can be expected to be obtained in 82% of samples analysed within 3 days of collection, which reduced to 50% after 4 days.

P2-161

Not every obese child has type 2 Diabetes Mellitus

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Background: Maturity onset Diabetes of the young (MODY) is a rare form of diabetes with specific features that distinguish it from diabetes mellitus type 1 (DM1) or type 2 (DM2). Research studies suggest that 5% of subjects diagnosed with diabetes before the age of 45 years have MODY, with 80% of them having been incorrectly diagnosed as having DM1 or DM2. Genetic testing my enable correct diagnosis and treatment, optimize glycemic control, reduce the risk of hypoglycemic events and long-term complications, and enable proper genetic counseling.

Case description: We present the case of a 11.84 year old female, who presented with obesity and a history of gradual weight gain since the age of 8 years. Her mother had obesity (BMI: 32 kg/m^2) and a history of gestational diabetes mellitus (GDM) that progressed to DM2, which was difficult to control despite treatment with insulin and metformin. Her elder 13 year old brother had impaired fasting glucose despite normal BMI, while her uncle had also been diagnosed with DM2. On clinical examination she had obesity (BMI: 31.5kg/m^2, BMI z-score: 3.55), mild acanthosis nigricans and hypertension. Edocrinologic evaluation revealed elevated fasting plasma glucose (FG: 122 mg/dL), and impaired glucose tolerance on OGTT (glucose @ 120': 182mg/dL, insulin 0'= 43.38μUI/ml). Despite the implementation of a personalized intervention program of diet and exercise, her glycemic control deteriorated. At 11.14 years, her FG (118 mg/dL) and insulin concentrations (31.5 μUI/mL) remained elevated. A repeat OGTT confirmed the diagnosis of diabetes (glucose @ 120': 225mg/dL) and the patient was commenced on metformin. Her HbA1C (5.5%) and C-peptide (3.8 ng/mL) were normal, and the antibody screen for DM1 was negative. The diagnosis of MODY was suggested by the strong family history, and genetic testing was undertaken. A heterozygous mutation in HNF1A gene was detected, thereby confirming the diagnosis of MODY3. The management plan now includes institution of sulfonylurea treatment.

Discussion: Patients with MODY may present with obesity and may be difficult to distinguish from DM2. Genetic testing allows confirmation of the correct diagnosis and leads to optimal treatment.

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Does insulin pump therapy improve glycaemic control in type 1 diabetes children: one year follow up

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Introduction: Since its introduction in the 1970s, insulin pump therapy became more and more recommended in patients with type 1 diabetes, in order to achieve and maintain an optimal glycemic control, by mimicking the physiological release of insulin through continuous infusion. The aim of our study was to determine the effectiveness of insulin pump therapy in improving the metabolic control in children with type 1 diabetes.

Patients and methods: A retrospective and descriptive study including children with type 1 diabetes treated with insulin pump therapy followed-up in the Department of Endocrinology-Diabetology-Nutrition of Mohammed-VI University Hospital Center of Oujda, in the eastern of Morocco, between 2017 and 2021. All patients received a clinical evaluation, capillary blood glucose monitoring and Hba1C testing. The statistical analysis was done by SPSS version 21.

Results: We collected 05 children with type 1 diabetes, followed up in our department. The mean age was 9,4 ± 4,7 years old, 4 girls and 1 boy. The duration of diabetes progression was less than 3 years for 60% of patients, with a mean duration of 5,6 years. No statural or ponderal abnormalities were noted. The mean Hba1C has decreased at 6months going from 7,4 ± 0,5 % to 7,2 ± 0,9.