PO-0064  CYSTIC FIBROSIS RELATED DIABETES IN ADOLESCENTS

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Background  Cystic fibrosis related diabetes (CFRD) is a combination between reduced insulin secretion and peripheral insulin resistance that only people with cystic fibrosis can get. CFRD is associated with a decline in lung function, poor nutritional status and high mortality rate.

Aim  Study of the clinical course and therapeutic management in adolescents with CFRD.

Methods  We present 2 cases of CFRD in a female patient (15 years old) and a male patient (17 years old) hospitalised at the CF Centre. The diagnosis of CF was confirmed by positive sweat test (Macroduct USA), identifications of CFTR mutation (F508del/F508del), small amounts of elastase in stool. Confirmation of diabetes was achieved by a blood glucose test, blood glucose profile, glycosylated Hb, C peptide, glucose and ketones in urine.

Results  On the background of pulmonary exacerbation, both patients had hyperglycemia (9.8/14.1 mmol/l). Subsequently, it triggered clinical syndromes suggestive for diabetes - polydipsia, polyuria, weight loss. Glycemic profile variations 7.8–15.8 mmol/l in boy and 10.4–21.0 mmol/l in girl. Glycosylated Hb values were high (7.3/14.1%) and C-peptide values were low (0.624/0.513). Glucose concentration in urine was 7.3/37.1 g/l and ketones was not detected. Diabetes treatment was performed with Insulin (Glargine, Aspart, Human), which produced clinical benefits by achieving glycemic and clinical syndromes control.

Conclusions  Patients with CFRD shows a specific clinical framework and require a strict medical diet control and surveillance of the insulin therapy, case that differs from the other types of diabetes. If early introduced, it significantly improves life expectancy towards these patients.

PO-0065  VITAMIN D STATUS IN CHILDREN WITH TYPE 1 DIABETES

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Background and aims  Serum vitamin D (sVD) deficiency may contribute to the development and progression of diabetic nephropathy (DN). Research has shown urinary vitamin D binding protein (uVDBP) excretion is increased after renal injury, and is associated with tubulointerstitial damage. Animal studies suggested that sVD deficiency may be associated with urine loss due to kidney damage. The aim was to test associations of sVD with levels of uVDBP, urinary vitamin D (uVD).

Methods  42 children aged 6–17 years with type 1 diabetes were examined: 24 normoalbuminuric patients (1st group) and 18 microalbuminuric (2nd group). 15 healthy children were included in controls. We measured serum and urine 25(OH)D levels, uVDBP concentrations and tested their correlations.

Results  sVD levels were decreased in the patients of the 1st and 2nd groups, compared with controls ((22.03 (17.23; 24.44) and 14.42 (12.02; 19.63), compared with 30.65 (28.45; 35.05) ng/ml, respectively) (p < 0.001)). uVDBP levels were elevated in the patients of the 1st and 2nd groups, compared with controls ((179.5 (174.0; 189.0) and 219.0 (216.0; 222.0), compared with 125.0 (116.5;136.0) ng/mg, respectively) (p < 0.001)). uVD levels were increased in the patients of the 1st and 2nd groups, compared with control group ((3.2 (2.9; 3.3) and 3.9 (3.7; 4.1), respectively) (p < 0.001)).
CIRCULATING OXIDISED LDL AND INSULIN IMPROVING METABOLIC MEMORY WITH INTENSIVE WITHDRAWN

Conclusions These data suggest that, theoretically, one of the causes of VD deficiency in patients with DN is a urine loss.

Objective To demonstrate variations in HbA1C (glycosylated haemoglobin) levels between two paediatric cohorts with different approach in diabetes management.

Results ox-LDL showed significant positive correlation with LDL and TC in all groups of obesity. After adjustment for age and sex, significant positive correlation was detected between ox-LDL with SBP, DBP, TC, LDL, insulin, and HOMA in groupII and with TC and FBS in groupI. Insignificant association was detected between ox-LDL and other anthropometric parameters including BMI in any group of obese children (p > 0.05).

Conclusions ox-LDL, as a marker of oxidative stress is not correlated with BMI among all studied obese children (aged 6–12 years). Increased oxidative stress has causal effects on insulin resistance in obese children without central obesity and on fasting blood sugar in those with central obesity. These findings emphasise the importance of obesity during childhood and suggest that the metabolic complications of obesity and body fat distribution are detectable early in life.