Aims Study the epidemiologic and clinical particularity of (DT1) in our patients.

Patients and methods From 2000 to 2011, children under 15 years with newly diagnosed type 1 diabetes mellitus and drown from department of pediatrics in Sfax were ascertained retrospectively. Cases of neonatal diabetes were excluded. Patients were devised on 3 groups: group 1: less than 5 years (107 cases), group 2: 5–10 years (98 cases), group 3: 10–16 years (98 cases).

Results The incidence was 27 new cases/year (17–34 cases). There were 166 boys - 159 girls. Median age at diabetes onset was 7 years (120 cases), group 3: 10–16 years (98 cases).

Conclusion The GD was higher in women and they were at increased risk of developing maternal and neonatal complications. The advanced maternal age, family history of diabetes, macrosomia, obesity and caesarean delivery were the main associated risk factors for GDM.

463 ELEVATED ACETOACETATE, OXIDATIVE STRESS AND MCP-1 LEVELS IN CORD BLOOD OF INFANTS OF DIABETIC MOTHERS doi:10.1136/archdischild-2012-302724.0643

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Background Infants of diabetic mothers (IDM) are at increased risk for metabolic complications. Type 1 and some type 2 diabetic patients have elevated levels of ketone bodies acetocetate (AA) and β-hydroxybutyrate (BHB) in addition to hyperglycemia. The effect of ketonemia on the inflammatory markers in infants of diabetic mothers is unknown.

Objective The aim of this study is to examine how hyperketonemia in diabetic mothers affects markers of inflammation and oxidative stress in their offspring.

Methods Blood was obtained from 23 diabetic mothers and 13 healthy mothers, and their infants' umbilical cords at the delivery. IL-8, MCP-1 and protein carbonyl (protein oxidation) levels were determined by ELISA. U937 human monocyte cell culture was used to examine the effect of AA and BHB on secretion of MCP-1.

Results There was a significant increase in the levels of AA in cord blood of diabetic mothers compared with cord blood of healthy mothers. A significant increase in the levels of protein oxidation (p<0.05) and MCP-1 levels (p<0.05) were observed in the cord blood of IDM. The level of MCP-1 significantly correlated (r=0.51, p=0.01) with the concentration of AA in the IDM. In further experiments with cultured monocytes treated with exogenous AA (0–4 mM), a significant increase in MCP-1 secretion was observed with AA but not in BHB-treated monocytes.

Conclusion This study suggests that blood levels of AA, oxidative stress and MCP-1 are elevated in IDM, which may contribute to the development of the metabolic complications seen in IDM.