(CARS) while administering the WPPSI-III. GARS and CARS scores were collapsed into autistic versus non-autistic categories and used to analyse the data.

**Results** Parent’s GARS identified a significantly higher number of children (38%) with ASD than did the examiner’s ratings (CARS, 10%). GARS’ groups did not differ significantly in NICU length of stay, incidence of sepsis, or severe IVH. At 6, 15, and 24 months the ASD group scored significantly lower on the BSIID-III and at four years they had a lower mean IQ (89 v. 105, p < 0.0001). Executive functioning for the ASD group on the Brief-P was poor (70.03 v. 47.4, p < 0.0001).

**Conclusion** Parent’s perception of NICU morbidities and cognitive delays affect the identification of ASD in extremely preterm infants.

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**Metabolism**

**O-050** THE ROLE OF FTO RS17817449 AND RS 9939609 SNP (SINGLE NUCLEOTIDE POLYMORPHISM) IN CHILDREN’ OBESITY

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Obesity is a problem with great importance and certain actuality in the field of paediatric pathology because of its increased incidence in children and its complications. Fat mass and obesity associated (FTO) genes are related with weight gain and obesity during childhood, being correlated with body mass index (BMI) and leptin levels.

The aim of our study was to establish the role of the polymorphisms of rs9939609 and rs17817449 FTO genes in determining obesity in a child population from Romania.

**Methods** We assessed 225 hospitalised children in a tertiary emergency paediatric hospital divided into: control group - 110 patients with normal nutritional status and obese group - 105 patients. The two groups underwent the evaluation of FTO rs17817449 and rs 9939609 SNP, and the measurement of anthropometric parameters [body mass index (BMI), middle upper arm circumference (MUAC), tricipital skinfold thickness (TST)].

**Results** We observed that the AA genotype of Rs9939609 SNP gene, is more frequent in obese group [p = 0.01, OR 2.778 95% CI (1.245–6.201)] and the A alleles is heigher in obese group [p = 0, 0148, OR 1,692 95%]. According to the RS17817449 gene mutation no association was found. We observed correlations in AA genotype, between BMI and MUAC (p = 0.0011) and TST, while A allele carriers was associated only with MUAC.

**Conclusion** Rs9939609 SNP AA genotype and A allele carries are associated with obesity in children, and are both correlated with BMI and MUAC, while AA genotype is also correlated with TST.

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**O-051** IMPAIRED ENDOTHELIAL FUNCTION IN ADOLESCENTS WITH TYPE 1 DIABETES OR OVERWEIGHT, MEASURED BY PERIPHERAL ARTERY TONOMETRY

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Obesity and diabetes are risk factors of vascular disease and both are correlated with obesity in children. Adolescents with type 1 diabetes (T1D) and with overweight. Early detection of vascular changes in these high-risk patient groups may allow targeted interventions to reduce cardiovascular disease in adulthood.

**Results** RH-PAT score was lower in adolescents with T1D compared to healthy controls (1.6 [1.3–2.0] versus 1.9 [1.7–2.4], p = 0.0154). The same trend was seen in adolescents with overweight or obesity (1.5 [1.3–2.0] versus 1.9 [1.7–2.4], p = 0.027). Similarly, the baseline pulse amplitude was higher in the group of patients with T1D (373.0 [208.3–522.0] versus 145.3 [52.3–300.2], p = 0.0033) and in adolescents with overweight or obesity compared to healthy controls (416.3 [360.3–675.7] versus 145.3 [52.3.300.2], p < 0.0001). Within the group with overweight, a significantly positive correlation was seen between baseline pulse amplitude and body mass index (BMI) standard deviation score (SDS) (r = 0.39 [0.006–0.67], p = 0.047).

**Conclusions** Endothelial dysfunction, quantified by lower RH-PAT score or higher baseline pulse amplitude, was observed in both adolescents with T1D and with overweight. Early detection of vascular changes in these high-risk patient groups may allow targeted interventions to reduce cardiovascular disease in adulthood.

**O-052** 25-HYDROXY VIT D, ADIPONECTIN LEVELS AND CARDIOMETABOLIC RISK FACTORS IN A SAMPLE OF OBESE CHILDREN

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Association between vitamin D, adiponectin and obesity is a matter of debate, as they play important role in linking obesity with different cardiometabolic risk factors.

**Objectives** Evaluation of the association between metabolic risk factors with both adiponectin and vitamin D levels and that between adiponectin and vitamin D among obese Egyptian children.

**Subjects and methods** This case-control cross sectional study consisted of 65 obese and 30 healthy children, aged 8–11 years. 25-Hydroxy vitamin D [25(OH) D] level, serum adiponectin, total cholesterol (TC), triglycerides (TG), high-density lipoprotein-cholesterol (HDL-C) and low-density lipoprotein-cholesterol (LDL-C) were measured.

**Results** The mean 25(OH) D levels in the obese and control groups were 29.9 ± 10.3 and 39.7 ± 12.7 ng/mL respectively (p < 0.0001). The mean 25(OH) D and adiponectin levels in the obese were lower than that in the control group (p < 0.0001). 25(OH) D were inversely correlated with body mass index (BMI), triglyceride, total cholesterol and LDL-cholesterol (LDL-C), While adiponectin level were inversely correlated with
ADIPONECTIN IS ASSOCIATED WITH METABOLIC
NON-INVAISIVE ASSESSMENT OF LIVER STIFFNESS

Methods

Obese children (Obese group; BMI-SDS above 90th percentile) and non-obese children without liver disease (Control group) were examined for liver stiffness measurement (LSM) with simultaneous controlled attenuation parameter (CAP) using Fibroscan. LSM and CAP were compared with clinical, biochemical, ultrasound and histological data.

Results

Obese group (n = 40, 12.4 ± 3.6 y) and the control group (n = 78, 10.6 ± 4.2 y) were evaluated for the study. Liver biopsy was performed in 5 patients. The CAP was significantly correlated with ultrasound fatty liver score (r = 0.806, p = 0.028) and histological steatosis grade (r = 0.819, p = 0.016). The LSM was significantly correlated with histological fibrosis grade (r = 0.848, p = 0.005). The CAP of the obese group (293.27 ± 55.72 dB/m) showed significantly higher value than control group (179.45 ± 44.75 dB/m) (p < 0.0001). In the control group, no biochemical parameters were correlated with LSM or CAP. In the obese group, the LSM correlated to the aspartate aminotransferase (r = 0.694, p < 0.0001) and the alanine aminotransferase (r = 0.6748, p < 0.0001), whereas the CAP correlated to no parameters.

Conclusions

FibroScan is a non-invasive tool to assess the liver stiffness and hepatic fat deposition simultaneously thus useful as a screening tool for non-alcoholic fatty liver disease especially in obese children.
Sample of Obese Children and Cardiometabolic Risk Factors in a Sample of Obese Children
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Arch Dis Child 2014 99: A41-A42
doi: 10.1136/archdischild-2014-307384.120