(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 BSID-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.

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 carriers are associated with obesity in children, and are both correlated with BMI and MUAC, while AA genotype is also correlated with TST.

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

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Background and aims Reactive hyperemia-peripheral artery tonometry (RH–PAT) is a non-invasive method for endothelial function assessment. The goal of this study is to investigate endothelial function as assessed with the RH-PAT in control adolescents and adolescents with type 1 diabetes (T1D) or overweight.
Methods RH-PAT score and baseline pulse amplitude was measured after an overnight fast in 25 control subjects (age 12–20 years), 34 adolescents with T1D and 27 adolescents with overweight or obesity.
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 [52.3300.2], 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 (?? < 0.001). The mean 25(OH) D and adiponectin levels in the obese were lower than that in the control group (?? < 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

systolic blood pressure (SBP), and diastolic blood pressure (DBP), and positively correlated with HDL-C However, there is no relation between 25(OH) D and adiponectin levels among obese children and total sample.
Conclusion Inspite of strong association between vitamin D and adiponectin levels with metabolic risk factors and obesity, there is no relation between 25(OH) D and adiponectin levels. In obese children, there are significant negative correlations between 25(OH) D with lipid profile, and between adiponectin levels with blood pressure. At certain adiponectin level, the relation between it and BMI disappears.

O-053 ADIPONECTIN IS ASSOCIATED WITH METABOLIC SYNDROME IN OBESE TAIWANESE ADOLESCENTS

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Background and aims Concurrent with the rise of the incidence in obesity, metabolic syndrome (MS) is increasingly prevalent in obese adolescents. Adiponectin is a major regulator of glucose and lipid homeostasis. Decreased adiponectin levels may be linked to MS. We aimed to test the hypothesis that adiponectin would influence the risk of MS in obese adolescents independent of its insulin sensitizer properties.
Methods This study was a cross-sectional study of the risk factors for MS in obese adolescents. A total of 593 obese subjects aged 10–18 years were recruited. International Diabetes Federation (IDF) consensus was used to define MS. We measured anthropometric, serum biochemical variables, serum adiponectin levels, and biomarkers for insulin resistance. We evaluated the independent influence of the adiponectin level on MS after controlling for the effect of insulin resistance measured by HOMA-IR.
Results 83 (14%) had MS. Obese adolescents with MS had significantly higher HOMA-IR and lower adiponectin levels than obese adolescents without MS. The adiponectin levels decreased with increasing number of metabolic syndrome components present in obese adolescents ($p < 0.001$). In multivariate logistic regression analysis, MS was significantly associated with age, body mass index, HOMA-IR, and adiponectin. For every 1μg/mL decrease in serum adiponectin level, there was an increased risk of having MS with an odds ratio of 1.229 (95% confidence interval, 1.112 to 1.358, $p < 0.001$).
Conclusions Decreased serum adiponectin level is associated with an increased risk for MS independent of the effects of age, BMI, and insulin resistance in our population of obese Taiwanese adolescents.

O-054 NON-INVAISIVE ASSESSMENT OF LIVER STIFFNESS AND HEPATIC FAT DEPOSITION BY FIBROSCAN IN JAPANESE OBESE CHILDREN

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Backgrounds and aims The aim of our study was to determine the usefulness and feasibility of transient elastography (FibroScan) assessing liver stiffness and hepatic fat deposition in obese children.
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 y ± 3.6 y) and the control group (n = 78, 10.6 y ± 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 ± 44.75dB/m) ($p < 0.0001$). The LSM showed significantly higher value in the obese group compared to the control group (5.7 ± 2.3 kPa vs 3.9 ± 0.9 kPa, $p < 0.0001$). 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 nonalcoholic fatty liver disease especially in obese children.

Neonatal Brain and Development Hypoxia – Ischemia

O-055 FRACTIONAL ANISOTROPY IN WHITE MATTER AND MEAN DIFFUSIVITY IN GREY MATTER CORRELATE TO NEURODEVELOPMENTAL PERFORMANCE FOLLOWING HYPOXIC-ISCHAEMIC ENCEPHALOPATHY

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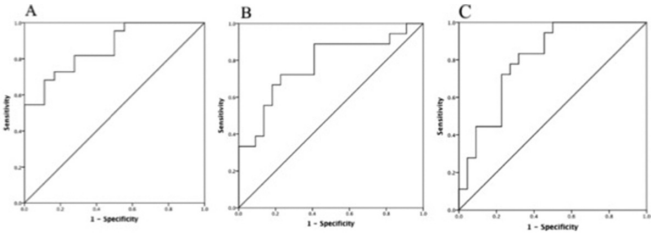
Background and aim Biomarkers are needed to test novel neuroprotective therapies efficiently. The aim was to test the hypothesis that fractional anisotropy (FA) in white matter (WM) and mean diffusivity (MD) in grey matter (GM) correlate to subsequent developmental quotient (DQ) in infants with hypoxic-ischaemic encephalopathy (HIE).
Methods We studied 40 infants with HIE (median [range] age 39^{+5} [36^{+4}–42^{+3}]), who underwent MRI within 21 days of birth and neurodevelopmental assessment at ≥12 months. Infants with a DQ >2SDs below the mean were considered to



Abstract O-055 Figure 1 Graphs showing receiver operating characteristic curves to estimate outcome with FA in WM (A), MD in thalami (B) and cortex (C)