0.05). It was of great significantly difference on the living habits and food consumption choice, such as eating food two hours before bedtime, having pressure to learning, introvert, eating vegetables infrequently and drinking carbonated drinks often, among the overweight and obesity students group and control group ($P < 0.05$). Multiple variables Logistic regression analysis showed that the BMI of parents, birth weight, and bad eating habits were the risky factors of the secondary school students in overweight and obesity, while doing exercise was the protective factor.

Conclusion: The BMI of parents and the birth weight of students were significantly correlated with the BMI of the students. The overall prevalence of overweight and obesity of the students in the study was significantly lower than the average of the nation, but overweight and obesity among the adolescents are nutritional problems, which should be emphasised by all sectors of society.

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IRON STATUS AT BIRTH IN TERM SMALL-FOR-GESTATIONAL AGE INFANTS

K. Mukhopadhyay¹, R.K. Yadav¹, **S.S. Kishore**², G. Garewal¹, V. Jain¹, A. Narang¹

¹PGIMER, ²Pediatrics, PGIMER, Chandigarh, India

Objectives: To determine body iron stores at birth in term small-for-gestational age (SGA) infants as compared to appropriate-for-gestational age (AGA) infants.

Design: Prospective cohort study

Setting: Level III neonatal unit

Patients: Mother infant pairs with gestation of ≥ 37 weeks and birth weight of at least 1.5 kg were enrolled. Asymmetric SGA infants were taken as cases and gestation matched AGA infants as controls. Maternal and cord blood samples and infant blood samples during follow up were obtained for measurement of various iron indices.

Outcomes: Primary- cord serum ferritin at birth, Secondary- proportion of infants with 'low' ferritin, serum ferritin in followup, and correlation among maternal and neonatal iron indices - Hb, serum Iron and total Iron binding capacity (TIBC).

Results: There were 50 SGA and 50 AGA mother-infant pairs. Cord serum ferritin levels were less in

SGA group as compared to AGA group [median (IQR): 68 (30,136) vs. 141 (63,259), $p=0.007$]. The proportion of infants with 'low' cord ferritin (defined as $< 40 \mu\text{g/L}$) were more in SGA group [17 (34%) vs. 9 (18%) in AGA group, $p= 0.05$]. Other iron indices were similar in both the groups. There was no correlation among various maternal and neonatal cord iron parameters. The serum ferritin levels at 28 ± 3 days of age were also less in SGA group with a trend towards significance ($p=0.06$).

Conclusions: Term asymmetric SGA infants have lesser total iron stores as compared to gestation matched AGA infants at birth.

Implications: SGA infants need iron supplementation starting from early infancy.

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MANAGEMENT AND PREVALENCE OF OBESITY IN BOSNIAN CHILDREN

M. Omerovic¹, **A. Bajraktarevic**², A.D. Djulepa³, Z. Begic⁴, I. Suljevic⁵, L. Sporisevic⁶

¹Pediatrics Endocrinology Department, ²Pediatrics Department, Public Health Institution of Canton Sarajevo-Pediatrics Department, ³Perinatology Department, General Hospital Sarajevo, ⁴General Pediatrics Department, Pediatrics Clinic Sarajevo, ⁵Biochemistry Department, Clinical Medical Center Sarajevo, ⁶Pediatrics Department, First Medical Aid Sarajevo, Sarajevo, Bosnia-Herzegovina

Background-aims: Childhood obesity is often the result of an interplay between many genetic and environmental factors. Obese children can develop serious health problems, such as diabetes and heart disease, often carrying these conditions into an obese adulthood. Obese children become targets of early and systematic discrimination.

Methods: We retrospectively examined the medical charts of all children who were between the ages of three and twelve years and presented to the physicians with pediatrician-diagnosed obesity in calendar years 2008-2009. For laboratory and radiographic evaluations of childhood obesity, the degree of investigation depends on the BMI, physical and historical findings, and the presence of risk factors.

Results: The prevalence of obesity in children has steadily risen during recent years in Bosnia and Herzegovina. Our reports have reached epidemic levels, with approximately 14 percent of Bosnian

children in these ages. The 2008-2009 Children Risk and Obesity Survey for Canton Sarajevo revealed that although 12.5 % of Bosnian girls were overweight or obese, 16.5% of Bosnian boys and 6% of Bosnian Gypsies were overweight or obese. There were not significant differences between other Bosnians national groups Bosniacs, Croats and Serbian children.

Conclusions: The incidence of childhood obesity has increased dramatically, including severe childhood obesity and obesity-related comorbid conditions. Treatment for children who are overweight or obese seems easy, that is, just counsel children and their families to eat less and to exercise more. Overweight children and adolescents are at risk for significant health problems both during their youth and as adults.

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CONTINUOUS GLUCOSE MONITORING IN MORBIDLY OBESE CHILDREN WITH NORMAL FASTING BG AND NORMAL OGTT

M. Alali, **A.T. Soliman**, F. Alkhalaf

Pediatrics, Hamad Medical Center, Doha, Qatar

This study has been undertaken to assess the glucose metabolism disorder by CGMS in morbidly obese children (BMI > 28) who have normal fasting glucose level and normal oral glucose tolerance.

Methods: Ten morbidly obese children were studied. Interstitial fluid (ISF) glucose levels were measured by CGMS for 72 hours as well as by self-monitored blood glucose (SMBG) (3-4 times per day). The circulating fasting glucose, insulin, c-peptide, free T4, TSH, and HbA1C concentrations were measured.

Results: The glucose levels in ISF measured by CGMS were highly correlated with those in capillary samples ($r=0.742$, $P<0.001$). In 10 obese children who finished the CGMS, 3 children had impaired postprandial glucose tolerance (BG > 7.6 mmol/L 2 h after food intake) and one had a diabetic curve (T2DM) (BG > 11.2 mmol/L 2 h after food intake). None of the children had elevated HbA1C level. Hyperinsulinemia and/or high C-peptide was recorded in 9 out of the 10 children.

Conclusions: Our data suggest that glucose metabolism disorder including impaired postprandial glycemia and type 2 DM can be early diagnosed in morbidly obese children using CGMS when fasting

BG and HbA1C levels are still normal. Further studies are required to improve the criteria of early diagnosis of glycemic abnormalities using CGMS.

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THE CLINICAL CONDITION OF INFANTS FROM PREGNANCIES WITH THYROID GLAND DISORDERS

M.M. Rascanin¹, J.M. Korac¹, M.S. Hadzovic², S.M. Vukovic¹, L.Z. Avramovic¹

¹Neonatology, ²Obstetrics, Clinic for Gynecology and Obstetrics Narodni Front Belgrade, Belgrade, Serbia

Introduction: Thyroid gland diseases are the second most frequent cause of endocrine dysfunctions in women in the reproductive period.

Work goal: To analyse the clinical condition of infants from pregnancies with thyroid gland disorders.

Techniques: The retrospective analysis included the infants born in the "Narodni front" Gynaecological-Obstetric Clinic during 2008, whose mothers had thyroid gland disorders diagnosed.

The results and discussion: In the period under review 7.544 infants were born, whereof 46 (0.60%) were born to women with diagnosed thyroid gland disorders. Three pregnancies were twins. 28.26% of the pregnant women were given therapy during pregnancy.

The distribution of body mass frequency stretched over a very broad range from 2,000 to 4,000 grams. The observed infants were dominantly male (67.40%). The percentage of preterm infants was 13.05%. The average AS amounted to 9.65 ± 0.52 .

The structure of neonatal morbidity includes perinatal asphyxia (8.69%), a metabolic imbalance in 14 children as follows: hyperbilirubinemia in 11 (23.91%), hypoglycemia in 2 (4.34%), hypocalcaemia in 1 (2.17%) child. Infections in one child (2.17%).

30 of the infants (65.21%) had a normal post-natal adaptation, while 16 (34.79%) of them required a certain extent of intensive post-natal care.

Conclusion: Every high-risk pregnancy poses a danger for the infant. The asphyxia percentage in our infants is significant, which calls for the strict supervision and continuous observation of the course of delivery.