

## Abstracts

**Background** Disregulation of blood pressure (BP) and lipid metabolism is the basis of metabolic syndrome (MS), but interrelation of these MS components is not well studied today.

**Aim** To investigate influence of BP upon regulation of lipid metabolism in obese children.

**Patients and Method** 40 obese patients aged 10–16 years ( $13.9 \pm 0.27$  y.o.) with high BP (HBP;  $143.6 \pm 1.1/82.4 \pm 2.9$  mm) – 1<sup>st</sup> group. 40 obese patients with normal BP ( $118.25 \pm 1.0/69 \pm 0.8$  mm,  $p < 0.01$ ) – comparison group (2<sup>nd</sup> group). Examination included BP measurement and analysis of lipid profile.

**Results** Dyslipidemia in 1<sup>st</sup> group was significantly more frequent than in 2<sup>nd</sup> group: 85% versus 67.5% ( $p < 0.05$ ). Comparison of lipid spectrum showed that different disorders of lipid metabolism were more frequent and more significant in 1<sup>st</sup> group in comparison with 2<sup>nd</sup>: hypertriglyceridemia – 57.5% versus 22.5% ( $p < 0.01$ ) and  $2.36 \pm 0.15$  mmol/l (mean value) versus  $1.64 \pm 0.04$  mmol/l ( $p < 0.01$ ); decreased HDL-C – 37.5% versus 10% ( $p < 0.01$ ) and  $0.91 \pm 0.01$  mmol/l versus  $1.03 \pm 0.02$  mmol/l ( $p < 0.05$ ); increased LDL-C – 45.0% versus 45.7% and  $3.72 \pm 0.11$  mmol/l versus  $3.32 \pm 0.14$  mmol/l ( $p = 0.06$ ); increased index of atherogenicity – 75% versus 60% ( $p < 0.05$ ) and  $3.93 \pm 0.1$  versus  $3.12 \pm 0.1$  ( $p < 0.01$ ).

**Conclusion** Arterial hypertension in obese children was associated with more frequent and significant disorders of lipid metabolism. So, arterial hypertension in obese children should be estimated as an additional risk factor of atherogenicity.

### 1025 THE ASSESSMENT OF THE VITAMIN D SUPPLY IN POLISH CHILDREN AT THE AGE OF 9–12 YEARS - MULTICENTRE RESEARCH

doi:10.1136/archdischild-2012-302724.1025

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**Introduction** It is universally known that the systemic deficiency of vitamin D may hamper the correct peak bone mass acquisition.

**Aim** The aim of the study was to determine the vitamin D supply in schoolchildren in Poland.

**Patients and methods** The study comprised 6 research centers from Poland. The healthy schoolchildren at the age of 9–11.99 were examined. In every child the liver metabolite of vitamin D was detected twice: after the winter and summer. The serum was analysed with the immunochemiluminescence method. The sufficient 25 OHD serum concentration was recognized at range of 20–100 ng/ml.

**Results** The 715 of children were examined. The greatest vitamin D shortages were observed in Szczecin and Białystok – in 95% and in 90% children. In Katowice and Lublin the lower concentration was detected in 89% and 88% of children and in Łódź and Poznań in 77% and 74%. The results of the 25OHD improved considerably after the summer. The greatest shortages were obtained in Poznań and Szczecin – in 52.9% and 42.1%. In Łódź the decreased concentration was observed in 41.5% of children. The lowest shortages were revealed in Lublin, Białystok and Katowice – in 28%, 26.3% and 26.3%.

#### Conclusions

1. The lower concentration of vitamin D in as many children indicates on adverse diet and climatic conditions.
2. The results of this study confirm the necessity of the prophylaxis of vitamin D deficiency in schoolchildren in Poland.
3. The considerable improvement of the 25OHD serum concentration after the summer may provide favourable influence of the sunlight.

### 1026 EXCESSIVE FLUORIDE INTAKE IS ASSOCIATED WITH HYPERPARATHYROIDISM AND HYPOTHYROIDISM IN CHILDREN AND ADOLESCENT, JEDDAH- SAUDI ARABIA

doi:10.1136/archdischild-2012-302724.1026

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**Background** Exposure to Fluoride (F) has increased significantly, so that individuals may be consuming more than recommended. Reported effects of excessive intake include reduced serum free thyroxine (FT4), triiodothyronine (FT3), calcium and increased parathyroid hormone (PTH) concentration.

**Objective** To investigate the prevalence of excessive Fluoride intake in apparently healthy children and adolescents, and explore its association changes in thyroid and parathyroid function in Jeddah-Saudi Arabia.

**Methods** 145 apparently healthy children and adolescents were recruited. 60 individuals satisfied selection criteria, and agreed to be enrolled. Subjects were examined dentally and clinically. Weights and heights were measured to calculate body mass index. Dental hygiene practices and fluoride intakes were recorded using recall method and food frequency questionnaires. Blood samples were obtained for the estimation of free thyroxine, triiodothyronine, thyroid stimulating hormone, Parathyroid hormone, calcium and phosphate. Fluoride was estimated in a samples of drinking water, beverages, and fasting urine of subjects. Total Fluoride intakes were calculated and used to subdivide groups into high and low or optimal intake subgroups.

**Results** Excessive Fluoride intake was identified among 36.7% of the individuals.

Calculated intake correlated with urinary excretion ( $r = 0.54$ ,  $p=0.0003$ ).

Significantly higher mean thyroid stimulating hormone and Parathyroid hormone and lower mean of free thyroxine, triiodothyronine, calcium and phosphate were found in various high intake subgroups, with some subjects having abnormal values.

**Conclusion** Excessive F intake is common, and is associated with hyperparathyroidism and hypothyroidism in studied population.

### 1027 MINERAL PROFILE OF PNEUMOCOCCAL DISEASES IN THE CHILDREN

doi:10.1136/archdischild-2012-302724.1027

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**Background and Aims** A mineral homeostases is association of processes of sorption, distributing, and elimination of mineral composition. Mineral matters play an important role in maintenance of acid-basic balance, osmolality, participate in the function of many enzymic systems, assists development of inflammatory process.

**Methods** Focus group included 21 children, aged  $11.1 \pm 0.95$  with community-acquired pneumonia, Pneumonia lower lobes acuta (PLA) in which was identified S.Pneumonia.

**Result** In the majority of cases the results of physical examination were satisfactory. The level of zinc in blood plasma of PA patients were  $0.68 \pm 0.17$  mkg/l,  $0.670 \pm 0.03$  mkg/l in urine, copper –  $0.42 \pm 0.03$  mkg/l in blood plasma,  $0.36 \pm 0.02$  mkg/l in urine, iron –  $0.75 \pm 4.2$  mkg/l in blood plasma,  $23.48 \pm 1.75$  mkg/l in urine, phosphorus –  $473.10 \pm 11.25$  mkg/l in blood plasma,  $312.50 \pm 11.84$  mkg/l in urine, iodine –  $70.23 \pm 5.81$  mkg/l in blood plasma,  $60.19 \pm 1.21$  mkg/l in urine. There were a positive correlation with the levels of Fe/Cu of blood serum ( $r=0.64$ ). With the level of calcium ratio of Fe/Cu had a