

**1456 DIFFERENCES OF INSULIN GENE GENOTYPES AND INSULIN LEVELS IN OBESE CHILDREN**

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**Aim** To compare gender and pubertal insulinemia levels and frequencies of Insulin gene (INSG) genotype rates in lean (control (C)) and obese (O) children.

**Methods** 578 O and 204 C children were investigated (divided into groups: prepubertal O (1<sup>st</sup>-o) m/f n=178/117 and C (1<sup>st</sup>-c) n=51/46, early pubertal (2<sup>nd</sup>-o) n=67/41 and (2<sup>nd</sup>-c) n=16/17, late pubertal (3<sup>rd</sup>-o) n=88/87 and (3<sup>rd</sup>-c) n=14/60). 129 O girls and 144 O boys and 104 lean girls and 55 lean boys were genotyped in INSG (A-23HphIT polymorphism). Serum insulin was detected by radioimmunoassay technique. Statistical analysis was performed using SPSS 16.0 (p=0.05).

**Results** Insulin ranges were significantly higher in O children than in C regardless of pubertal stage and sex: p=0,0001 between the 1<sup>st</sup>-o and 1<sup>st</sup>-c, p=0,001 in the 2<sup>nd</sup> groups and p=0,0001 in the 3<sup>rd</sup> groups respectively. Correlations between insulinemia and BMI (r=0.4, p=0,0001) were revealed. There were gender differences (chi-square 6.56; p<0.05) between genotypes rates occurrence in O children: 51.9% girls and 61.8% boys had AA-genotype, 13.2% girls and 4.9% boys - TT, versus to C children: AA-genotype was found in 61.5% girls and 56.4% boys, TT-genotype - in 3.8% girls and 5.5% boys (p>0.05). Insulin level was higher in O children with AA homozygote genotype in compared with TT-genotype (p=0,003). There were no changes of insulin values in control group irrespective of the genotype polymorphisms.

**Conclusion** A-23HphIT INS genotypes in girls with adiposity were significant differ from normal children irrespective of gender. Insulin level in obese children depends on A-23HphIT INS polymorphisms.

**1457 ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF HEALTH PROFESSIONALS REGARDING BREAST FEEDING IN KING FAHAD ARMED FORCES HOSPITAL**

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**Background and Aims** It has been recognized that exclusive breast-feeding rates in our community are suboptimal. To determine if one of the reasons is insufficient counselling, we aimed to assess knowledge, attitude and practice of health professionals in our community.

**Methods** This was a prospective study performed in King Fahad Armed Forces Hospital during the yearly conference. We designed a questionnaire divided into three sections of multiple choice questions, the first assessing knowledge of basic facts related to breast-feeding, with the second and third assessing attitude and practice. A total of 322 questionnaires were filled in by physicians and nurses from various departments, midwives and health educators. Means and differences between occupations were calculated, and statistical analysis was performed using SPSS version 17.0.

**Results** Mean knowledge score was 70% ± 10.1%. Differences between occupations was highly significant (p value < 0.001) with the highest scores in NICU physicians. Despite this variation, attitude and practice did not differ significantly between groups and positive answers were found in 92% and 61.4% respectively. Surprisingly, although 88% felt they were doing their best, only 42% gave options for working mothers, just below 50% tried to persuade

nursing mothers regarding exclusive breast feeding, and a mere 36% counselled mothers on possible obstacles and how to overcome them.

**Conclusions** Despite generally high knowledge scores in our study population, as well as positive attitudes, actual practices need to be improved. Further studies to assess barriers to optimal counselling practices need to be performed.

**1458 PHYSICAL ACTIVITY IN PRIMARY SCHOOL CHILDREN OF TEHRAN CITY**

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**Background and Aims** It is clear that measuring physical activity (PA) in children is a major challenge and Accelerometers are useful instruments for this reason. The aims of this study were to measure PA pattern of student by accelerometer and to evaluate differences by gender and age.

**Methods** The sample for present study comprised 270 children (boys n=119 and girls n=151), aged 6 to 9 years old. The GT3X activity monitor was used as an objective measure of daily PA. Each student was scheduled to wear the accelerometer during the week of monitoring.

**Results** The mean overall activity was higher in boys than in girls, but this difference was significant only on weekdays (P<0.05). Overall PA was significantly correlated with age both in whole week (P<0.01) and weekends (P<0.001).

**Conclusion** Our findings are important for a better understanding of PA pattern in students of Tehran city, which is essential for education and health promotion. The results show that boys are more active than girls.

**1459 SOCIO-CULTURAL FACTORS RELATED TO MALNUTRITION IN COMMUNITIES OF CENTRAL INDIA**

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**Background** New WHO child growth standards confirmed that children born anywhere in the world have same growth potential, given the optimum start. Growth is influenced more by nutrition, feeding practices, environment, and healthcare than genetics or ethnicity.

**Objective** To assess the impact of various socio-cultural factors on nutritional status of children.

**Setting** Randomly selected Anganwadis, 5 each from 3 randomly selected ICDS (Integrated Child Development Scheme) blocks from total 7 ICDS blocks of Bhopal district.

**Patients** 400 children between 6 months to 3 years registered at selected Anganwadis.

**Methods** Data collection using structured questionnaire including information on demography, socioeconomic status, feeding practices, knowledge and beliefs regarding childhood nutrition and utilization of different government-led services. This was supplemented by detailed physical examination and anthropometric assessment.

**Results** Out of 400 children, 123 (30.75%) were moderately malnourished while 30 (7.5%) were severely malnourished with slight female predominance (53.4 and 54.6% respectively). Low birth weight, higher birth order (≥4), delayed initiation and early interruption of breast-feeding, mixed feeding, bottle-feeding, delayed initiation of complementary feeding; irregular Anganwadi visits and illiteracy of parents were significantly associated with malnutrition.