P1-513 ASSOCIATION BETWEEN CHANGE OF WEIGHT STATUS AND DEVELOPMENT OF DEPRESSION DURING PUBERTY: A COMMUNITY-BASED LONGITUDINAL STUDY IN JAPAN

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Background Many studies have reported the association between overweight and depressive status during puberty. Recently, it has been suggested that this association is affected by a person's image of their body which differ between gender and nationality. Although these associations were mainly examined by cross-sectional study, this study aimed to examine the relationship between change in weight and developing depression, taking into account gender in this prospective cohort study.

Method In 2007, a community-based cohort study was conducted with 1347 children in grades 4–7. Height, weight, depressive status and body image were surveyed at the baseline and at the 1-year-follow-up. Over weight and having depressive symptoms were defined using international cut-off points. Multiple logistic regression analyses were conducted to examine the effects of weight status and body image on developing depression by gender.

Result The follow-up rate was 89.1%, and 6.9% of these children experienced depressive symptoms at follow-up. Some boys who continued to be dissatisfied with their body weight as overweight were more likely to develop depression compared with those who were satisfied with their body weight (OR, 2.5; 95% CI 1.0 to 6.0). On the other hand, some girls who continued to be satisfied with their body weight were significantly less likely to develop depression. In both genders, body image caused a more increasing risk for depression than weight status.

Conclusion This study suggested that body image effected the association between weight status and depression; those effects might be affected by gender difference.

P1-514 TIMING OF MOTOR MILESTONES ACHIEVEMENT AND DEVELOPMENT OF OVERWEIGHT IN CHILDHOOD

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Background Late achievement of motor milestones may increase the risk of overweight since early achievers have increased possibility to build lean body mass and expend energy. Further overweight infants may have delayed achievement of gross motor milestones as the overweight may limit mobility. The aim of this paper was to investigate whether delayed ability to sit and walk is associated with BMI at age seven and whether increasing weight at birth and at 5 months of age postpone the achievement of motor milestones.

Methods We examined whether timing of achievement of motor milestone (ability to sit and walk independently) predicted later overweight or later increase in Body Mass Index (BMI=weight (kg)/height² (m)) z-scores and we examined whether increasing birth weight and increasing BMI at 5 months predicted later achievement of motor milestones. The associations were analysed in a dataset of 32 973 children participating in the Danish National Birth Cohort. Mothers were recruited in the period 1996–2002 and follow-up took place during 2003 to 2010. We used logistic and linear regression analysis.

Results At age 7 years, a total of 10% of the children were overweight including 1.5% obese. Late ability to sit (>8 months) and to walk (>15 months) was not associated with overweight at age seven (OR's between 1.00; (CI 0.98 to 1.02) and 1.02; (CI 0.95 to 1.07)). Although statistically significant, the results from linear regression showed very weak inverse associations between later achievement of the ability to walk and sit (in months) led to a reduced BMI at age seven for both boys and girls. Similarly, birth weight and weight at 5 months was weakly associated with achievement of the ability to walk and sit, slightly stronger in boys than in girls.

Conclusions We conclude that that delayed motor development is neither a predictor of nor a risk factor for childhood overweight and that birth weight and BMI at age 5 months do not predict delayed motor development.

P1-515 PATTERNS OF INFECTION-RELATED CANCERS IN A RAPIDLY DEVELOPED CHINESE POPULATION. AN AGE-PERIOD-COHORT ANALYSIS

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Introduction With economic development, non-communicable diseases replace infectious diseases as the leading cause of death; how such transition occurs for infectious diseases with long latency has rarely been considered. We took advantage of a Chinese population with rapid economic development in the mid-20th century to study changing patterns of infection-related cancers.

Methods We used sex-specific Poisson regression to estimate age, period and cohort effects on adult deaths 1976–2005 from eight infection-related cancers in Hong Kong. We also considered two cancers (colorectal and lung) not likely related to infections.

Results Cervical, head and neck, and esophageal cancers, associated with sexually transmitted infections, decreased for the first birth cohorts with sexual debut in a more developed environment. Leukaemia and non-Hodgkin's lymphoma, associated with vertically transmitted infections, decreased for the first cohorts born into a more developed environment. Birth cohort patterns were less clearly related to environmental changes for nasopharyngeal, stomach and liver cancers. Non-infection related cancers had generally different birth cohort effects.

Conclusion Mortality rates for cancers related to early life infections may depend on the population history. Rapid economic development may leave behind residual reservoirs of latent infections that may prohibit equally rapid reductions in some infection-related cancers.

P1-516 HIGH RISK BEHAVIOURS AND ITS ASSOCIATION WITH HEPATITIS B INFECTION AMONG MALAYSIAN ANTENATAL MOTHERS

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Objectives To assess the prevalence HBV infection among antenatal mothers and to determine its association with risk factors especially those related to behaviours which increase their exposure to blood and body sera.

Methodology A total of 1105 antenatal mothers who attended government clinics in Ipoh were screened for HBV infection between July and October 2008. They also completed self-administered

questionnaires on their socio-demographic, reproductive, family and medical history, and behaviours/exposures such as dental and surgical procedures, blood transfusion, induced abortion, early sexual exposure, multiple sexual partners, anal sex, acupuncture, ear and body piercing, body tattoo and sharing needles for drug use.

Results Sixteen of 1105 (1.4%, 95% CI 1.0 to 2.0%) mothers test positive for HBV infection. The most common behaviours/exposures were ear piercing (77.5%), dental procedures (51.2%), surgical procedures (21.4%), and other body piercing (12.4%). Very few reported blood transfusion (3.4%), body tattoo (3.1%), induced abortion (2.9%), multiple sexual partners (1.6%), anal sex (0.5%), drug addiction (0.4%) or needle sharing (0%). The prevalence of HBV infection were significantly higher among confirmed HBV carriers, and those with positive family history of HBV infection, and jaundice. There were no significant differences in HBV infection by ethnicity, history of surgical and dental procedures, history of blood transfusion, or any of the risk behaviours explored.

Conclusion Prevalence of HBV infection was low at 1.4%. Risk behaviours were low due to under reporting or antenatal mothers are lower risk compared to the general population. We did not find any significant association between HBV infections and the explored risk behaviours.

P1-517 DRIVERS AND VISION: A SURVEY IN KERMAN PROVINCE (SOUTHEASTERN PART OF IRAN)

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Introduction About 90% of sensory information to a driver is through vision. Vision is the most important sense for driving. The purpose of this study was to determine vision and causes of visual defects among public vehicle drivers.

Methods In this cross-sectional study, vision and causes of visual deficits were evaluated among drivers that were selected sequentially by transportation organization in Kerman province in 2009.

Results Of 4000 public drivers assessed, 361 (9.02%, 95% CI 9.01 to 9.03) had visual acuity at the level not approved for driving by traffic rules in Iran (with old glasses). After ocular examination and correction of refractive errors they were 69 (1.72%). Legal blindness (VA<1/10) was found in 13 eyes. The common causes of visual deficits were refractive errors (88.7%), age related macular degeneration (10.9%) and amblyopia (6.3%).

Conclusion A large number of public vehicle drivers did not have vision at the level approved for driving in Iran. Most of them, their vision can be improved. Some of them should not be allowed to drive due to irreversible poor vision.

P1-518 DISTRIBUTION OF β^E -GLOBIN GENE IN MALARIA ENDEMIC AND NON-ENDEMIC ZONES OF ASSAM, INDIA

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Introduction β^E -globin gene is the major variant haemoglobin prevalent among the autochthonous population of Assam, India, with variable gene frequencies. The gene frequency for this variant haemoglobin is as high as 0.6 in some of the ethnic groups. The geo-climatic condition of the area also facilitates transmission of *Plasmodium falciparum* in this part of the country. Distribution pattern of

β^E -globin gene among autochthonous inhabitants inhabiting in malaria endemic and non-endemic zones was evaluated.

Methods Blood sample were collected from Kachari communities (Bodo & Mech) inhabiting in malaria endemic (n=669) and non-endemic zones (n=202) adopting stratified random sampling method. Individual samples were screened for Red Cell Indices by automated haematology cell counter and HPLC based Variant Haemoglobin Testing System were used for the detection of variant haemoglobins and thalassaemias.

Results Red Blood Cell indices indicated lower level of haemoglobin, Mean Cell Volume (MCV) and Mean Cell Haemoglobin (MCH) in subject carrying β^E -globin gene. Gene frequency of β^E -globin gene in malaria endemic and non endemic zone was 0.586 and 0.483 respectively. However, distribution of β^E -globin gene is increased in malaria endemic zone. In malaria endemic zone, Hb F level in subject carrying β^E -globin gene was significantly differed from non-endemic zone.

Conclusion Significant difference of distribution pattern of β^E -globin gene and higher level of Hb F in subject carrying β^E -globin gene in malaria endemic zone is the striking outcome of the study.

P1-519 ASSOCIATION OF SERUM FERRITIN AND TRANSFERRIN SATURATION WITH ALL-CAUSE AND CARDIOVASCULAR DISEASE MORTALITY: NHANES III FOLLOW-UP STUDY

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The purpose of this study is to examine the association between serum ferritin and transferrin saturation with all-cause, and CVD mortality among 13 858 persons (men: 6532, women: 7326) aged 20 years and older from death certificate data linked to the NHANESIII of a nationally representative sample of the noninstitutionalized USA population. Serum ferritin and transferrin saturation levels were categorised according to sex-specific quintiles. RR and 95% CIs were calculated from Cox proportional hazards regression models adjusted for age, race-ethnicity, poverty index, education, body mass index, smoking, alcohol intake, systolic blood pressure, total cholesterol, and Charlson Comorbidity Index. There were no statistically significant associations between serum ferritin and all-cause, and CVD mortality. There were statistically significant u-shaped associations between transferrin saturation and all-cause mortality in men (first quintile vs third quintile, RR 0.73 (95% CI 0.61 to 0.88), first quintile vs fifth quintile, RR 0.79 (95% CI 0.65 to 0.95) and between transferrin saturation and CVD mortality in women (first quintile vs fourth quintile, RR 0.58 (95% CI 0.48 to 0.84), first quintile vs fifth quintile, RR 0.68 (95% CI 0.48 to 0.98), all tests for trend, p<0.01). In this large cohort, there was consistent evidence of increasing risk of mortality at lower transferrin saturation levels. In fact, lower transferrin saturation levels were associated with an increased risk of all-cause and CVD mortality. The results are compatible with the possibility that there is an inverse association between transferrin saturation levels and risk of mortality.

P1-520 PREVENTIVE HEALTH OF INVISIBLE AND UNCONTACTED TRIBES IN AMAZON FOREST

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The Amazon has uncontacted indigenous peoples in its forests. To remain away from contemporary civilisation these tribes may be