

accordance with National recommendations for children, 2003. Exposure assessment was based on the levels of scalp hair elements and lead in blood. The analysis was done using ICP-MS and AAS methods. Blood lead samples were analysed using the Lead Care instrument. Multiple logistic regression analysis was done with the adjustment for confounders.

Results Concentrations of studied elements were in subtoxic range, average levels were significantly higher in Gus, then in Moscow. **In Gus** were revealed strong positive associations of BP, especially diastolic, with the tertile rank of blood Lead (in the range 4.4 µg/dl and higher) and hair cerium (in the range 0.7 mg/g and higher). OR for elevated diastolic BP due to Lead was 3.0; 95% CI 0.59 to 15.76; $p < 0.186$; due to Cerium - 3.9; 95% CI 1.23 to 12.53; $p < 0.021$. **In Moscow** BP was significantly correlated with the tertile rank of hair nickel (in the range 0.2 mg/g and higher). OR for elevated systolic BP due to nickel was 2.5 (95% CI 1.1 to 5.7, $p < 0.026$); for diastolic BP - 5.6; 95% CI 2.2 to 14.6; $p < 0.001$.

Conclusions The blood Lead, hair Nickel and Cerium levels, even in the low range of concentrations, positively associates with the risk of elevated blood pressure in children.

P2-122 RESPONSE AND PREDICTORS OF RESPONSE, TO PEGYLATED INTERFERON AND RIBAVIRIN FOR CHRONIC HEPATITIS C PATIENTS IN SCOTLAND: ALANINE AMINOTRANSFERASE (ALT) AND GAMMA GLUTAMYL TRANSFERASE (GGT) ARE VALUABLE PRE-TREATMENT MARKERS OF AN SVR IN ROUTINE CLINICAL PRACTICE

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Introduction It is not clear what proportion of HCV (hepatitis C virus) patients attain a sustained viral response (SVR) when treated with pegylated interferon and ribavirin combination therapy outside randomised clinical trials (RCTs). Secondly, pre-treatment factors available in routine clinical settings that are predictive of SVR (the optimal treatment outcome) are not known.

Methods HCV clinical databases from nine Scottish treatment clinics were used to derive a retrospective cohort of 934 patients initiated on HCV treatment during 2000–2007.

Results In our cohort, 39% (123/315, 95% CI 34% to 45%) of genotype (GT) 1, and 70% (414/594, 95% CI 66% to 73%) of genotype 2/3 (GT2/3) patients achieved a SVR; this compares with pooled estimates of 47% for GT1 (95% CI 41% to 52%), and 80% for GT2/3 (95% CI 75% to 85%) patients from RCTs. Pre-treatment factors significantly associated with SVR were: gamma glutamyl transferase (GGT) ≥ 55 IU/l (adjusted OR: 0.46, 95% CI 0.33 to 0.65), platelet count $\geq 150 \times 10^9/l$ (1.92, 95% CI 1.26 to 2.93), ALT quotient ≥ 2.5 (for those GT1 infected: 2.66, 95% CI 1.46 to 4.84), GT2/3 (for those with ALT quotient < 2.5 : 4.05, 95% CI 2.82 to 5.80; and for those with ALT quotient ≥ 2.5 : 1.91, 95% CI 1.01 to 3.61), age (per ten year increase) (0.84, 95% CI 0.72 to 0.99), ever HBV infection (0.67, 95% CI 0.45 to 0.98), and male gender (0.70, 95% CI 0.50 to 0.98).

Conclusions The principal conclusions are twofold: (1) the proportion of patients attaining a SVR in Scottish routine practice is marginally lower than in RCTs, and (2) in addition to genotype,

GGT (in all patients) and ALT (in GT1 patients only) emerge as valuable predictors of an SVR in the routine clinical setting.

P2-123 EVALUATION OF RISK FACTOR AND PROTECTION FOR CHRONIC NON COMMUNICABLE DISEASES MONITORING SYSTEM BY PHONE SURVEY: VIGITEL, BRAZIL 2006 TO 2008

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Vigitel is a system that monitors risk factors by means of continuous telephone interviews on samples of adults living in households with landline telephones in the Brazilian capital. To evaluate the system from 2006 to 2008, we used the Updated Guidelines for Evaluating Public Health Surveillance Systems from CDC, semi-structured questionnaires for interviews with key-informants and comparisons to other surveys, such as the BRFSS.

Results The Vigitel operation has seven steps: sample selection, eligible households identification, individual selection, interview, check, closure, data management. The number of questions ranged from 78 to 92. Among state coordinators, 96% demonstrated good knowledge of objectives and 86% of outcomes and among interviewers, 54% to 36%, respectively, indicating acceptability. Lack of operation process documentation proved stability. Completeness of variables was greater than 90% and response rate higher than 70%. Prevalence of smoking, high blood pressure and obesity were similar to other surveys, indicating the sensitivity to capture these factors. Changes in workers, in the questionnaire and the software didn't affect the operation. Time between final data collection and data availability was 3 months. Telephone company coverage of 80%, probability sampling and data weighting make it representative. The system allows use of indicators in planning of interventions and policy development.

Conclusions The system demonstrated simplicity, acceptability, stability, and good data quality. It was flexible, opportune, representative and useful in monitoring risk factors in population. Improvement in dissemination of results, allowing local workers to perform data analysis and document system operation is necessary for to improve the system.

P2-124 LOWER LIPOPROTEIN(A) LEVELS CAUSE CEREBRAL HAEMORRHAGE: THE JICHI MEDICAL SCHOOL COHORT STUDY

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Introduction Lipoprotein(a) (Lp(a)) plays an important role in atherosclerosis. Some observational studies report Lp(a) as positively associated with myocardial infarction, but the relationship between Lp(a) and stroke is unclear. We examined the relationship between Lp(a) and the incidence of stroke in the general population.

Methods A multi-center population-based cohort study was conducted. A total of 10 444 men and women were eligible. Data were obtained from April 1992 to July 1995 in 12 rural districts in Japan. Subjects were divided into tertiles of Lp(a) levels. We analysed the risks of all stroke and of stroke subtypes in each sex using Cox's proportional hazard models.

Results Mean follow-up duration was 10.7 years. Cut-off levels of Lp(a) for tertiles were 10 mg/dl and 23 mg/dl. Risks for all stroke were 1.34 (95% CI 1.03 to 1.74) and 1.00 (95% CI 0.77 to 1.31) in the lower and the higher Lp(a) group, respectively, with reference to the middle group after adjustment for age, smoking status, drinking status, systolic blood pressure, and body mass index. Risks for cerebral haemorrhage (lower tertile 2.25, 95% CI 1.28 to 3.94 and higher tertile 0.93, 95% CI 0.49 to 1.77), were similar to all stroke and no significant relationships were seen between Lp(a) and cerebral infarction (lower tertile 1.15, 95% CI 0.83 to 1.60 and higher tertile 1.02, 95% CI 0.74 to 1.41), or subarachnoid haemorrhage (lower tertile 1.04, 95% CI 0.52 to 2.09 and higher tertile 0.96, 95% CI 0.48 to 1.90).

Conclusion Lower Lp(a) was an independent risk factor for stroke, especially, for cerebral haemorrhage in the general population.

P2-125 INCIDENCE OF TYPE 2 DIABETES BY HbA_{1c} AND OGTT: THE ISFAHAN DIABETES PREVENTION STUDY

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Aims The aim of this study was to estimate the incidence of type 2 diabetes using newly proposed haemoglobin A_{1c} (HbA_{1c}) and current oral glucose tolerance test (OGTT) definition in an Iranian non-diabetic population.

Methods A total of 923 non-diabetic first-degree relatives of patients with type 2 diabetes 20–70 years old in 2003–2005 were followed through 2009 for the occurrence of type 2 diabetes. At baseline and through follow-ups, participants underwent a standard 75 g 2-h OGTT and HbA_{1c} measurements. Prediction of progression to type 2 diabetes by OGTT-defined or HbA_{1c}-defined was assessed with area under the receiver-operating characteristic curves based upon measurement of fasting plasma glucose, 2-h post-load glucose values and HbA_{1c}.

Results The prevalence of type 2 diabetes was 9.2% (95% CI 8.2 to 10.2) by OGTT-defined diabetes and 7.9% (95% CI 6.9 to 9.0) by HbA_{1c} ≥6.5. The incidence of type 2 diabetes was 2.0% (95% CI 1.6 to 2.4) (1.8% men and 2.1% women) per year by the current OGTT definition, whereas the incidence rates were 1.7% (95% CI 1.3 to 2.0) (1.6% men and 1.7% women) per year by HbA_{1c} ≥6.5. Of those diagnosed with type 2 diabetes by OGTT, 69.6% had HbA_{1c} <6.5% and therefore would not have been classified as having type 2 diabetes.

Conclusions The incidence and prevalence of diabetes using newly proposed HbA_{1c} threshold in this first-degree relatives of patients with type 2 diabetes was slightly lower than using current OGTT definition.

P2-126 WEIGHT CHANGE AND BLOOD PRESSURE, LIPIDS AND GLYCAEMIC CONTROL AMONG PATIENTS WITH TYPE 2 DIABETES

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Objective Although weight loss in patients with type 2 diabetes is very important, the data on the effect of long-term weight change on blood pressure (BP), lipids and glycaemic control among patients with type 2 diabetes receiving routine care are limited. The aim of this study was to assess the long-term impact of weight change on BP, plasma lipids and glycaemic control among patients with type 2 diabetes receiving routine care.

Methods During the mean (SD) follow-up period of 9.2 (3.4) (range 2–15) years, 7712 patients with type 2 diabetes have been examined to determine changes in weight, BP, plasma lipids and glycaemic control using a linear mixed effects model for repeated measures. The mean (SD) age of participants was 51.3 (10.5) years with a mean (SD) duration of diabetes of 6.3 (6.3) years at initial registration.

Results The change in fasting plasma glucose and glycosylated haemoglobin (HbA_{1c}) from baseline to last follow-up examination was significantly more favourable in those who gain weight during follow-up than those who lost weight or stable weight. Systolic and diastolic BP and lipids also raised significantly more in the group with weight gain.

Conclusions Although this population of Iranian type 2 diabetes had negligible weight change over mean 9.2 years. Weight gain in patients with type 2 diabetes was associated with increase in BP and plasma lipids, but improvement in glycaemic control.

P2-127 A CROSS SECTIONAL STUDY ON SEXUAL PRACTICES AND KNOWLEDGE RELATED TO SEXUAL HEALTH OF YOUTH IN THE REMOTE TEA PLANTATION SECTOR, SRI LANKA

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Background Issues related to sexual health among remote estate youth has gained a high priority in Sri Lanka.

General objective Describe the knowledge and practices related to sexual health of the youth in the tea plantation sector and conduct a pilot study on the sero - prevalence of common sexually transmitted diseases.

Specific objectives Explore the sexual health knowledge, educational needs and risk taking behaviours in the selected sample.

Methodology A descriptive cross sectional survey using a self administered questionnaire and interviews of 400 remote tea estate workers, aged between 18 and 24 years was carried out.

Results The sample consisted of 188 males (47%) and 212 females (53%), with a mean age 20.23 years. A total of 362 (90.5%) were able to read and write. Peers were their main source of knowledge (59%) and most reliable person to discuss sexuality ((55% with a 95% CI of 50% to 59%). The mean age of sexual debut for males was 12.56 (SD=1.88) and for females it was 16.21 years (SD=1.5). Eighty six percent of males had homosexual experience and 63% had more than one same sex partner. Their knowledge on STDs, HIV and available services were very low. None of the participants were test positive for HIV, Hepatitis B and Syphilis.

Conclusion Sexual health services are not sufficient to meet the needs of youth in the plantations and available services are not being delivered appropriately. A comprehensive, integrated sexual health service is needed for the youth and adolescents in the estate sector.

P2-128 DISTRIBUTION OF 10-YEAR AND LIFETIME PREDICTED RISK FOR CARDIOVASCULAR DISEASE IN THE INDIAN SENTINEL SURVEILLANCE STUDY POPULATION

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