

had received therapy were interviewed face to face in Persian using a semi-structured interview guide. Interviews were audio taped, then transcribed in full, translated into English by the investigator, and analysed using MAXqda software.

Results The value men accorded to early detection of prostate cancer was found to be conditional upon their beliefs of prostate illness and their experiences about cure. There was a lack of information about the early detection process. The men felt that medical intervention was focused on the biological aspects, ignoring the needs of the psychosocial concerns. The men were not expecting to have symptoms because of prostate treatment; this influenced their subsequent decision-making.

Conclusion Given men's perceptions and experiences of the illness, screening of prostate cancer seems to have wider implications. The findings suggest that early detection of the disease in Iran may need a screening model that incorporates both biomedical and psychosocial aspects.

P2-300 EFFECTS OF ANTIHYPERTENSIVE DRUG TREATMENTS ON BONE TURNOVER IN ELDERLY MEN: A CROSS-SECTIONAL ANALYSIS OF THE FUJIWARA-KYO OSTEOPOROSIS RISK IN MEN (FORMEN) STUDY

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Introduction Previous studies have found that some antihypertensive drugs may lower fracture risk. However, the impact of antihypertensive drugs on bone metabolism is not entirely clear. We examined how antihypertensive drugs influenced bone status and bone turnover markers.

Methods We analysed 1632 Japanese men aged ≥ 65 years from a baseline survey (the FORMEN Study) conducted during 2007–2008 as a part of the Fujiwara-kyo study, a larger prospective cohort study. Associations between antihypertensive drugs (ACE, β -blocker, and thiazide diuretic treatments) and bone metabolism (bone mineral density [BMD] at the lumbar spine [LS] and total hip, serum osteocalcin [OC], and serum tartrate resistant acid phosphatase isoenzyme 5b [TRACP5b]) were investigated cross-sectionally.

Results Proportions of hypertension and subjects taking antihypertensive drugs were 76.0% (n=1240) and 42.4% (n=692), respectively, in the subjects (mean age; 73.0 ± 5.1 years). The numbers of subjects prescribed ACE, β -blockers, and thiazide diuretics were 62, 41, and 12, respectively. Neither BMD nor bone turnover markers varied significantly between those with ACE prescription and those without. We observed significantly higher LS BMD values and significantly lower OC and TRACP5b values in subjects taking β -blockers than in non-users, and the differences in both marker values remained significant after adjusting for confounders (OC: 4.08 [0.18] vs 4.91 [0.03] ng/ml, p=0.039; TRACP5b: 151.23 [0.18] vs 209.98 [0.03] mU/dl, p=0.009). TRACP5b values in subjects with thiazide diuretics also remained significant lower after adjusting for confounders (139.98 [0.33] vs 208.91 [0.03] mU/dl, p=0.007).

Conclusion Bone turnover could be suppressed by β -blocker and thiazide diuretic treatment. Future investigations should be conducted longitudinally.

P2-301 HIGH PREVALENCE OF SEDENTARINESS AMONG BRAZILIAN ADOLESCENTS LIVING WITH HIV/AIDS

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Introduction Several studies have shown high prevalences of sedentariness among adolescents, however, studies assessing sedentariness of adolescents with HIV are scarce. The aim of this study is to assess the prevalence of sedentariness in this population and its associated factors.

Methods 91 patients aged 10–19 years responded to the questionnaire on physical activity validated for Brazilian adolescents. The questionnaire is comprised of 17 questions (15 on sports and two on transportation physical activity). The cut-off point for sedentariness was 300 min/week.

Results Mean age at interview was 15.1 years (SD=2.6 years). A greater proportion of girls was sedentary (80%×61%, p<0.05). All other variables tested were not associated with sedentariness: ethnicity (white-65%; non-white-62%, p=0.286); living with family (yes-70%; no-89%, p=0.220); altered waist circumference (yes-70%; no-72% p=0.881) and overweight (yes-0%; no-8%, p=0.081). No differences between means of biochemical parameters were found when comparing active and sedentary adolescents: viral load (15995×15922 copies, p=0.995); CD4 (485×441 cells, p=0.540); total cholesterol (156×162 mg/dl, p=0.523); HDL-cholesterol (39×37 mg/dl, p=0.373) and LDL-cholesterol (94×95 mg/dl, p=0.874). 1/3 of adolescents spent no time practicing physical activity. Among those who reported practicing it, the sports most cited were: football (44.4%), volleyball (14.4%) and cycling (7.8%). Mean time spent practicing sports was 198.9 min/week (SD=271.1 minutes) and mean time spent walking/cycling to school was 74.1 min/week (SD=104.2).

Conclusion A high prevalence of sedentariness was found in this population. Sedentary behaviour may have a negative impact on adolescents' health.

P2-302 NOCTURNAL INTERMITTENT HYPOXIA AND CARDIOVASCULAR RISK FACTORS IN COMMUNITY-DWELLING JAPANESE: THE CIRCULATORY RISK IN COMMUNITIES STUDY (CIRCS)

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Introduction To investigate whether nocturnal intermittent hypoxia (NIH), a surrogate marker for sleep apnoea, is associated with cardiovascular risk factors, we conducted epidemiological studies.

Methods The CIRCS is a prospective cohort study across Japan since 1963 to examine risk factors for cardiovascular disease. Subjects aged 40–69 years were recruited to the sleep study in three communities. NIH was estimated by hourly occurrences of oxygen desaturation of $\geq 3\%$ (3% oxygen desaturation index [3% ODI]) by a pulse-oximeter during a night's sleep in the participant's own home. We defined no, mild and moderate-to-severe NIH by 3% ODI as <5, 5 to <15 and ≥ 15 events/h, respectively. We conducted cross sectional studies on

hypertension among 1424 men, on CRP among 1422 men and 2466 women and on metabolic syndrome among 1710 men and 2896 women, and a prospective study on type 2 diabetes among 1603 men and 2795 women.

Results Compared with no NIH, the multivariable OR of hypertension was 1.63 (95% CI 1.1 to 2.5) for moderate-to-severe NIH. The prevalence of a high CRP (≥ 1.0 mg/l) was 1.4 to 1.7-fold higher for mild to severe NIH in both sexes. The multivariable ORs of metabolic syndrome was 3.2 (2.2 to 4.7) for moderate-to-severe NIH among men and 5.8 (3.4 to 9.8) among women, respectively. The multivariable-adjusted HRs of developing type 2 diabetes was 1.3 (0.9 to 1.8) among those with mild NIH and 1.7 (1.0 to 2.8) among those with moderate-to-severe NIH.

Conclusion NIH was associated with hypertension, elevated serum CRP levels, the accumulation of metabolic risk factors, and increased risk of developing type 2 diabetes among middle-aged Japanese.

P2-303 DEVELOPMENT OF PREDICTIVE EQUATIONS FOR DXA MEASURES OF ADIPOSITY IN AN INDIAN POPULATION

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Introduction Predictive equations for DXA measures of total and abdominal adiposity from simple anthropometry for an Indian population will enable more accurate estimates of adiposity to be derived in other studies.

Methods Using 1230 men and 636 women from Hyderabad, India, multiple linear regression was performed to generate predictive equations for DXA measures of total body fat (grams) and total abdominal fat in the L1–L4 intervertebral region (grams). Equations were developed separately for each sex on a training set (60% of sample) and tested on the validation set (40% of sample).

Results For total body fat in males, a simple equation based on two variables (height and weight) gave an R^2 of 0.83 and SEE (SE of the estimate) (square root of the sum of observed–predicted values/number of observations) of 2200 g whereas a more complex equation (additionally including triceps skinfold, waist circumference and calf skinfold) gave an R^2 of 0.94 (SEE=1600 g). In females, hip circumference and calf skinfold alone explained 92% of the variance in total body fat (SEE 2300 g) increasing to 95% with waist circumference, subscapular skinfold, weight and calf circumference included (SEE 1800 g). Waist circumference was the best predictor of fat in the L1–L4 region for both sexes ($R^2=0.88$ and 0.89 respectively); more complex equations achieved an R^2 of 93%. Predictive equations for both traits produced an SEE<0.5 SDs, indicating good accuracy.

Conclusion DXA measures of adiposity can be derived with a high degree of precision from simple anthropometric measures in an Indian population.

P2-304 CHILDHOOD INFECTIOUS DISEASES AND PREMATURE ADULT MORTALITY: RESULTS FROM THE NEWCASTLE THOUSAND FAMILIES STUDY

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Introduction Early life infections may negatively influence health in later life, but there have been few studies of the association, due to

the difficulty of obtaining adequate information from throughout life. This study utilised longitudinal data from the Newcastle Thousand Families Study, a prospective cohort of 1147 individuals born in Newcastle-upon-Tyne (UK) in 1947, to assess the impact of various childhood infectious diseases on mortality between ages 18 and 60 years.

Methods Detailed information was collected prospectively at birth and during childhood on a number of early life factors. Study members were “flagged” by the UK National Health Service Central Register when they died or emigrated. Death between ages 18–60 years was analysed in relation to childhood infections, adjusting for potential confounders, using Cox regression.

Results History of infection with either tuberculosis or whooping cough was independently predictive of mortality between ages 18 and 60 years [Adjusted HR, aHR=2.00 (95% CI 1.17 to 3.41) and 1.95 (95% CI 1.21 to 3.14) respectively]. Of the other variables examined, adult mortality was more common among men [aHR=0.62 (95% CI 0.39 to 0.97)] and among first-borns [aHR=2.95 (95% CI 1.52 to 5.73)]. The effect of whooping cough on mortality was largely attributable to a higher risk of death from cancer, particularly non-smoking related cancers.

Conclusion In a pre-vaccination cohort from Northern England (UK), childhood infection with tuberculosis or whooping cough was associated with an increased risk of premature adult mortality independent of other childhood circumstances. Further studies are required to investigate this association in different populations.

P2-305 FIVE-YEAR CHANGES IN DIETARY INDEXES ARE ASSOCIATED WITH CHANGES IN CARDIOVASCULAR RISK FACTORS

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Rationale and Objectives The sensitivity of dietary indexes to measure changes in dietary habits is unclear. The objective of the study was to investigate whether 5-year changes in the Dietary Quality Score (DQS), Healthy Eating Index, Dietary Quality Index (DQI) and the Mediterranean diet score were associated with changes in dietary related cardiovascular (CVD) risk factors.

Materials and Methods A random sample of 13 016 men and women aged 30–60 years were invited for a 5-year lifestyle intervention programme. A total of 4562 were included in the statistical analysis. The association between changes in dietary indexes and changes in CVD risk factors was investigated in multiple linear regression models.

Results and Findings Improved dietary habits according to the DQS at 5-year follow-up was significant negatively associated with changes in weight ($p=0.01$), waist circumference ($p=0.009$), total cholesterol ($p=0.02$), LDL cholesterol ($p=0.006$). The Mediterranean diet score was significantly associated with weight ($p=0.001$) and diastolic blood pressure ($p=0.02$), the DQI was borderline significant associated with weight and waist circumference, whereas no significant association was found for the Healthy Eating Index.

Conclusion Changes in the simple DQS were stronger associated with changes in CVD risk factors than the more complex dietary indexes.