

**P2-208 EPIDEMIOLOGY OF MENTAL HANDICAP IN BAGHDAD**

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**Objectives** To study epidemiology of mental handicap within 5 years in regard to sex, age of diagnosis, parents consanguinity, family history, degree of retardation, factors affecting patient's mother during pregnancy and delivery, affecting the patients during infancy and childhood, and the definite diagnosis.

**Methods** Retrospective study, data were drawn from records of 573 patients for 5 years, 261 from IRH and 312 from five institutions for handicapped.

**Results** Male/female: 2.1/1. 55.9% from IRH were diagnosed at age <6 years. 36.5% mildly retarded, 49.4% moderate, and 14.1% severely retarded. 52.5% was the rate of consanguinity among the patient's parents. 33.3% had a positive family history. 15.7% of their mothers had disease or trauma during pregnancy, 10.7% had difficult, forceps or C.S delivery. 24.1% had infectious disease during infancy or early childhood, 18.2% had convulsions, 8.9% jaundice, and 7% trauma. Those with definite diagnosis (27.2%), 8.6% have mongolism, 7% post traumatic, 5.8% brain damage, and 2.8% had microcephaly, the remaining phenylketone urea, cretinism and cerebral palsy.

**Conclusions** There were predisposing factors promoting retardation in males, which suggested genetic influence. Only 55.9% were diagnosed in pre-school age. The high consanguinity of parents indicated the genetic factors operating on aetiology, still 47.5% had no family history which indicated the influence of specific environmental factors. Many of the diseases or complications during pregnancy, infancy and childhood were preventable or can be controlled. Mongolism had prevalence similar to other countries, so no racial difference. Most of patients was classified moderate retardation.

**P2-209 ASSOCIATION OF DIETARY FACTORS WITH BREAST DENSITY AMONG WOMEN IN SOUTH GERMANY**

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**Introduction** Effects of dietary factors on mammographic breast density are not sufficiently consistent to elaborate preventive recommendations. This study aims to investigate the association between current diet, alcohol consumption and mammographic density.

**Methods** We performed a cross-sectional study in 424 women aged 21–84 years. Current Mediterranean type dietary pattern, multi-vitamin-multimineral-supplementation, alcohol consumption and confounders were assessed with a self-administered questionnaire in the mammography unit of University Hospital Ulm (2008). Mammographic density was evaluated according to American College of Radiology classification and summarised in low (ACR1, 2) and high (ACR3, 4). Logistic regression models were calculated adjusted for age and BMI, menopausal status and other confounders.

**Results** Adherence to Mediterranean type dietary pattern was inversely associated with high mammographic density, adjusted for age and BMI (per unit increase OR=0.95; CI 0.90 to 0.997, p=0.41). After stratification by menopausal status statistically significant association was present in post-menopausal women only. Current use of multivitamin-multimineral supplements was inversely associated with a high mammographic density in the adjusted model (OR=0.53; CI 0.34 to 0.83, p=0.01). Stratification by menopausal

status shows similar associations, statistically significant only in post-menopausal women. Compared to non-drinkers excessive alcohol consumption (10–47 g/day) was in trend associated with higher mammographic density in the adjusted model (OR 1.47; CI 0.82 to 2.63, p=0.03).

**Conclusion** Adherence to Mediterranean type diet and current use of multivitamin-multimineral supplements may be associated with a lower mammographic density and may have a protective effect against breast cancer.

**P2-210 METABOLIC SYNDROME AND CERVICAL CANCER IN THE METABOLIC SYNDROME AND CANCER PROJECT (ME-CAN)**

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**Introduction** Little is known about the association between the metabolic syndrome (MetS) and cervical cancer carcinogenesis.

**Methods** The Me-Can cohort includes 288 834 women. During an average follow-up of 11 years 425 invasive cervical cancer cases were diagnosed. HRs were estimated by use of Cox proportional hazards regression models for quintiles and standardised z-scores (with a mean of 0 and a SD of 1) of body mass index, blood pressure, glucose, cholesterol, triglycerides and a MetS score. Risk estimates were corrected for random error in the measurements.

**Results** The MetS score was associated with increased risk of cervical cancer (per 1 SD increase, HR, 1.26; 95% CI 1.08 to 1.47). Among individual metabolic factors, associations were observed for BMI (per 1 SD increase, 1.12; 1.01 to 1.25), blood pressure (1.25; 1.04 to 1.49), and triglycerides (1.39; 1.15 to 1.68). In models including all metabolic factors simultaneously, the associations for blood pressure and triglycerides persisted. Stratification by morphology showed stronger association of triglycerides with squamous cell carcinoma (SCC) (1.42; 95% CI 1.09 to 1.84) than with adenocarcinoma (ADC) (0.97, 0.53 to 1.75). Among older women cholesterol (50–70 years HR, 1.34; 95% CI 1.00 to 1.81), triglycerides (50–70 years HR 1.49, 95% CI 1.03 to 2.16 and ≥70 years HR 1.53, 95% CI 1.08 to 2.17) and glucose (≥70 years HR 1.87, 95% CI 1.12 to 3.12) concentrations were associated with cervical cancer.

**Conclusions** The results of this large prospective study provide evidence for an association between cervical cancer and the MetS as well as the individual MetS factors including BMI, blood glucose and triglyceride levels.

**P2-211 A TARGETED INTERVENTION TO PROMOTE BREAST CANCER SCREENING AMONG RURAL WOMEN IN COASTAL KARNATAKA, INDIA**

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**Introduction** Breast Cancer is the second common cancer among women in India and nearly 21% of the women, who develop the disease, die within the first year of diagnosis. Lack of awareness and facilities for early detection and treatment are some of the reasons for this. The rural field Practice area of a tertiary care teaching hospital is the setting for this study wherein a community based intervention was initiated to promote breast cancer screening

among rural women. The study also tried to identify the awareness, perceptions & attitude towards breast cancer & mammography use among these women.

**Methods** Breast cancer educational sessions were conducted by trained health workers. Women were later contacted at their homes and invited to attend a CBE and mammography at the tertiary care centre at no cost. Those willing were provided transportation as well as assistance to attend the screening session.

**Results** A total of 599 women were screened over a span of 2 years (response rate =85%). Most of the participants were in the 40–50 age group (59.8%). Seventy nine per cent were unaware regarding the risk factors for breast cancer and nearly 60% were not aware of any breast cancer screening methods. Only 16% had heard of mammography earlier. Anxiety, pain and cost factor were some of the perceived barriers for mammography.

**Conclusion** In spite of poor awareness regarding breast cancer & its screening modalities participation was encouraging, demonstrating that a targeted intervention could bring about the required health seeking behaviour.

## P2-212 ASSOCIATION BETWEEN THE RANK POLYMORPHISM AND THE NUMBER OF TEETH AMONG JAPANESE

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**Introduction** The receptor activator of nuclear factor- $\kappa$ B (RANK), the receptor for RANK ligand, is a member of the tumour necrosis factor receptor superfamily and plays a central role in osteoclast development. There is little epidemiological evidence as to whether RANK polymorphisms influence oral health. This study investigated the association between the RANK polymorphism and the number of teeth among Japanese.

**Methods** We used baseline data from the Shizuoka area in the Japan Multi-Institutional Collaborative Cohort Study. The analysis included 4927 subjects (3348 men, 1579 women; age range 35–69 years). The genotyping of the RANK polymorphism (rs12458117) was conducted using a PCR-based TaqMan method. The number of teeth was self-reported.

**Results** The mean tooth number was  $24.2 \pm 5.6$  (range 0–28) and decreased with age ( $p < 0.01$ ). The subjects with the GG genotype had significantly fewer teeth than those with the GA or AA genotype, after adjusting for sex, age and covariates ( $p = 0.02$ ). In a multivariate analysis after adjusting for covariates, men with the GG (OR, 2.6; 95% CI 1.1 to 2.1) and GA (OR, 1.4; 95% CI 0.7 to 1.6) genotypes had a higher risk of having less than 20 teeth, as compared to those with the AA genotype. No significant OR was found in women.

**Conclusion** Our findings suggest that the RANK polymorphism is related to tooth loss among Japanese men.

## P2-213 ASSOCIATION BETWEEN DIETARY PATTERNS AND SERUM C-REACTIVE PROTEIN AMONG JAPANESE MEN AND WOMEN

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**Introduction** Dietary pattern may influence the risks of cardiovascular disease, atherosclerosis, and type 2 diabetes through its effects on inflammation. We evaluated the association between dietary pattern and serum high-sensitivity C reactive protein (hs-CRP) in a Japanese population.

**Methods** In this cross-sectional analysis, we used baseline data from 3905 men and 5640 women (age 40–69 years) who participated in a population-based cohort study between November 2005 and December 2007. Participants with possible inflammation-related diseases, current analgesic use, high hs-CRP levels ( $\geq 3000$  ng/ml) or extreme dietary energy intake were excluded. We used 46 items from a validated short food frequency questionnaire and examined major dietary patterns by factor analysis.

**Results** We identified five dietary patterns: healthy (high in vegetables and fruit), Western (high in meat and fried foods), seafood (high in shellfish, squid, fish, etc), bread (high in bread and low in rice), and dessert (high in confections and fruit). After adjustment for age, alcohol use, smoking, physical activity, and body mass index, hs-CRP levels in men were inversely associated with the healthy, bread, and dessert patterns ( $p$ -trend: 0.02, 0.06, and 0.001, respectively) and positively associated with the seafood pattern ( $p$ -trend=0.03). In women, hs-CRP levels were inversely associated with the healthy pattern ( $p$ -trend=0.07) and positively associated with the Western pattern ( $p$ -trend=0.06).

**Conclusions** The healthy dietary pattern may be associated with suppressed inflammation in Japanese men and women, independently of body mass index and other factors. The sex-specific associations of hs-CRP with other dietary patterns (eg, the seafood pattern) require further study.

## P2-214 RICE INTAKE AND TYPE 2 DIABETES IN JAPANESE MEN AND WOMEN: THE JAPAN PUBLIC HEALTH CENTER-BASED PROSPECTIVE STUDY

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**Introduction** Refined carbohydrates have been suggested to deteriorate glucose metabolism; however, whether persons with elevated intakes of white rice, a major staple food for the Japanese, experience increased risk of developing type 2 diabetes remains unclear. We prospectively investigated the association between white rice intake and risk of type 2 diabetes.

**Methods** Participants were 25 666 men and 33 622 women aged 45–75 years who participated in the second survey of the Japan Public Health Center-based Prospective Study and had no prior history of diabetes. We ascertained food intake by using a validated 147-item food frequency questionnaire. ORs of self-reported physician-diagnosed type 2 diabetes over 5 years were estimated by using logistic regressions.

**Results** A total of 1103 new cases of type 2 diabetes were self-reported. Rice intake was significantly associated with an increased risk of type 2 diabetes in women; the multivariate-adjusted OR for the highest compared with lowest quartiles of rice intake was 1.65 (95% CI 1.06 to 2.57;  $p$  for trend =0.005). In men, the association was unclear, although there was a suggestion of a positive