

Method We are establishing a prospective night shift worker cohort in Shenzhen, China. More than 10 000 workers will be recruited and followed up. Currently, we have recruited more than 4000 workers but most questionnaires have not yet been input. A standardised questionnaire is used to collect information on lifetime night shift work, light at night, occupational hazards, sleep disorders, etc. Fasting blood and spot urine samples are also collected for further usage. CVD risk factors include hypertension, diabetes, overweight and dyslipidemia etc. All participants will have the annual or biennial occupational physical examination.

Results We reported data from a manufacturing company dealing with welding and shipment. We obtained 131 day workers and 370 shift workers with a response rate of 95%. The shift workers are significantly younger than day workers. The smoking and alcohol drinking status are comparable in two groups. The presence of number of CVD risk factors positively relate to the years of shift work after adjusting for age and other confounding factors.

Conclusions These preliminary results suggest long-term night shift work may increase CVD risk factors, while these will be updated in the conference. [National Natural Science Foundation of China (Project number 81273172 and 81372964), Shelly@cuhk.edu.hk (Lap Ah Tse)]

0175 PRELIMINARY BASELINE CHARACTERISTICS OF A PROSPECTIVE NIGHT SHIFT WORKER COHORT IN SHENZHEN, CHINA

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Objectives The incidence of metabolic syndrome (MS) increases rapidly in China. Growing evidence suggests that alterations in circadian systems and sleep disorders have participated in the etiology of metabolic disorders. This study aims to investigate the relationship between night shift work and MS risk and examine the underlying mechanisms that have never been explored by previous epidemiological studies.

Method We are establishing a prospective night shift worker cohort in Shenzhen, China. More than 10 000 participants will be recruited and followed up. A standardized questionnaire is used to collect information on lifetime night shift work, light at night, occupational hazards, sleep disorders, etc. Fasting blood and spot urine samples are also collected for further usage. All participants will have the annual or biennial occupational physical examination. MS will be diagnosed following the NCEP-ATPIII criteria. Currently, we have recruited more than 4000 workers but most questionnaires have not yet been input.

Results We reported data from the occupational health examination. We obtained 3878 male workers and 250 female workers with a response rate of 95%. More than 50% participants are aged from 20–30 years. About 3.4% subjects' fasting blood glucose was more than 6.1 mmol/L. More than 30% subjects are overweight, and 25% subjects' is with high blood pressure.

Conclusions It is the basic characteristics of the recruited participants. The preliminary result of night shift work and MS will be present in the conference. [National Natural Science Foundation of China (Project number 81273172 and 81372964), Shelly@cuhk.edu.hk (Lap Ah Tse)]

0176 ASSESSMENT OF EXPOSURE TOTETRACHLORETHYLENE AND ITS CLINICAL IMPACT IN A POPULATION OF 60 EMPLOYEES CLEANERS IN WEST ALGERIA

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Objectives Evaluation of the clinical impact of chronic exposure to perchlorethylene in west Algeria.

Method After protocol definition, inclusion of salaries for three pressings willay as the west Algeria (Sidi Bel Abbes, Oran and Ain Témouchent), we conducted a study papers / unexposed to evaluate the clinical symptoms with matching on age and sex.

55Data collection made by a questionnaire (one of Hogstedt). Were conducted psychometric tests.

The evaluation of occupational exposure by air sampling was carried out in two pressings using colorimetric detector tubes for spot metering (Dragger pumps). The first in any point in the space, the second opening when the window.

Results Sixty employees and 120 controls were included. 50% of employees often have fatigue at the end of work against it are more than 50% sometimes complain of fatigue at the beginning and at the workplace and irritability.

There is a significant difference between exposed and unexposed population on the presence of clinical signs except for the presence of three signs: nightmares, tingling in arms and digestive disorders.

There is a significant difference between the two populations for all the psychometric tests.

Perchlorethylene air rate upon opening of the window is greater than or equal to 100 ppm and both are higher than the limit value ACGIH 2005

Conclusions This study confirms the existence of an occupational exposure to perchlorethylene dry cleaners or employees of the questionnaire results allowed us to identify a number important information on the symptoms observed in the study population according to exposure.

0177 EXPOSURE TO STYRENE AND THE RISK OF CANCER: A LONG-TERM FOLLOW-UP STUDY OF WORKERS IN THE DANISH REINFORCED PLASTICS INDUSTRY

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Objectives Styrene was incorporated in the 12th Report on Carcinogens (RoC) based on sufficient experimental evidence in animals. The human evidence has been evaluated as limited by RoC and IARC. The objective of this study was to analyse the risk of

haematopoietic malignancies and other cancers following occupational styrene exposure.

Method The cohort consists of 74 902 workers (84% men) in the Danish reinforced plastics industry, originating from 481 companies ever producing reinforced plastics in Denmark 1964–2009. We identified all workers in the National Supplementary Pension Fund Registry for which all employees are compulsory members. Cancer diagnoses were found in the National Cancer Registry. Standardised Incidence Rate Ratios (SIRs) and 95% confidence intervals (95% CI) were used for relative risk estimation.

Results Among the 74 902 workers, we identified 10 374 cases of cancer accumulating 1.5 million person years. The overall SIR was 1.00 (95% CI 0.98–1.02). SIR for lymphatic and haematopoietic cancers was 0.99 (0.91–1.07). Among male workers we observed increased risk of buccal cavity and pharyngeal cancers (SIR 1.24; 1.12–1.37), cancers of the respiratory system (SIR 1.33; 1.26–1.39), and bladder cancer (SIR 1.08; 1.0–1.17), and among female workers cancers of the respiratory system (SIR 1.41; 1.22–1.62).

Conclusions The cohort experiences the same overall cancer risk as the general population and no increased overall risk of malignant haematopoietic diseases was apparent. However, we observed increased risks for cancers that may be due to confounding from smoking and alcohol. Internal risk assessment that includes historical styrene exposure data will supplement the current findings.

0178 QUALITY OF LIFE OF WORKERS SUFFERING FROM SHOULDER PAIN

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Objectives To compare the quality of life (QoL) in three groups of workers suffering or not from shoulder pain (SP) lasting more than one month during the preceding 12 months.

Method Between 2002–2005, 3710 workers were randomly included in a French surveillance system of work-related musculoskeletal disorders. In 2007, 2332 responded to a follow-up questionnaire, 2049 were still active. Workers completed the Nordic Questionnaire to assess SP and the SF-36 for QoL. Three groups were defined according to health status at follow-up:

- Group 1: workers without SP (men: 87.9%; women: 79.2%)
- Group 2: workers with SP without neck, elbow and hand/wrist pain lasting more than one month during the preceding 12 months (men: 4.2%; women: 6.0%)
- Group 3: workers with SP and neck, elbow or hand/wrist pain lasting more than one month during the preceding 12 months (men 7.9%; women 14.8%)

The mean scores of SF-36 were compared with Kruskal-Wallis test and post-hoc comparisons were performed. Analyses were stratified by gender.

Results Workers in group 2 had lower scores of physical health compared to workers in group 1, whatever the gender. Workers in group 3 had lower scores of physical and mental health compared to workers in group 1. Two dimensions of mental health

in men and the four dimensions of physical health and one dimension of mental health in women had lower scores in group 3 compared to group 2.

Conclusions Workers with SP and upper-limb pain have poorer QoL compared to workers without SP and workers with SP without upper-limb pain.

0179 INDEPENDENT MEDICAL EVALUATIONS - IMPORTANT, NEGLECTED, IN NEED OF REFORM: A SYSTEMATIC REVIEW

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Objectives Independent medical evaluations (IMEs) are a common and influential form of assessment, often influencing whether patients receive compensation for an injury or illness. To inform the evidence-base underlying IMEs, we conducted a systematic review of all primary literature conducted in North America.

Method We searched CINAHL, EMBASE, MEDLINE and PsycINFO and other sources for studies published through to Sept. 20, 2011. We included all primary literature on the topic of IMEs from a North American perspective. Assessment for study inclusion, data extraction and risk-of-bias analyses were performed in duplicate.

Results We included 52 studies, all of which were observational in design and most of which focussed on determining the rate of malingering among examinees. Estimates of non-credible symptom over-reporting among patients presenting for IMEs ranged from 16% to 55%, with studies at lower risk of bias finding higher estimates. Other studies found that inter-rater reliability among IME assessors for assigning degree of impairment to the same IME report was poor, and that patients presenting for an IME with external incentive (e.g. litigation, disability benefits) perform systematically worse across a range of psychometric tests versus patients presenting with similar illness/injury but without external incentive.

Conclusions Symptom exaggeration is common among patients presenting for IMEs, and particularly among those patients with external incentive. IME assessors reviewing the same case demonstrate little agreement regarding the degree of impairment that should be assigned. Standards for IME assessment and reporting are urgently needed to ensure greater reliability and validity of this common form of assessment.

0180 DOES LONG-TERM STRESS CAUSE DEPRESSION? OCCUPATIONAL NOISE EXPOSURE AND THE USE OF ANTIDEPRESSANTS

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