Carcinogens/Cancer

O-271 ROLE OF FATHER’S OCCUPATIONAL EXPOSURE IN THE GENESIS OF CHILDHOOD LEUKEMIA IN UNORGANIZED SECTORS: A CASE-CONTROL STUDY

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Introduction Due to industrial development, humans are exposed to more than 60,000 chemical substances. The majority of these substances are implicated in the genesis of cancers especially leukemias, in employees and even their descendants. We aim to identify father’s occupational factors implicated in the genesis of childhood acute leukemia in unorganized sectors.

Materials and Methods Case-control study carried out between July 2011, and June 2012. Cases were children with a confirmed diagnosis of acute leukemia. Controls were children consulting in the pediatric department. One control was matched to each case for age and gender. A questionnaire on lifetime job history was administered to all the fathers.

Results We enrolled 66 cases of acute leukemia and 66 controls. A predominance of boys was noticed (sex ratio: 1.53). The average age of the cases was 7.83 ± 3.48 years versus 7.80 ± 3.57 years for the controls. The diagnosis was an acute lymphoblastic leukemia in 59 patients (89.4%). The majority of the cases fathers had exercised mainly in the building and public works (24.2%) versus 16.7% in the control group; and in agriculture (15.2% versus 9.1%) without a statistically significant difference (p = 0.3). After multivariate analysis, childhood acute leukemia’s risk of occurrence was higher when fathers were exposed to pesticides (pa = 0.01, ORa = 3.75, IC 95% = [1.27 – 11.03]) and cement (pa = 0.03, ORa = 2.67, IC 95% = [1.06 – 6.7]). The majority of the cases' fathers (72.7%) were exposed before and during their wives' pregnancies versus 48.5% among the controls’ fathers with a statistically significant difference (p = 0.003).

Conclusion The occupational risk factors in unorganized sectors might play a role in the etiopathogenesis of acute leukemia in descendants. With regard to our study, pesticides and cement seem to be most implicated and necessitate suitable preventive measures.

Disease surveillance

O-297 FINDINGS AND EXPERIENCES FROM THE PAPER-BASED OCCUPATIONAL DISEASE AND INJURY REGISTRY IN INDIA

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Introduction For effective prevention of occupational disease and injuries, accurate and timely reporting on the occurrence of occupational disease and injuries is critical. Disease and patient registries have been proven a rich sources of information for improvement in decision making health areas. Currently, there is no such accessible database in OSH domain in India. In view of unavailability of any national or regional database for occupational diseases and injuries, a paper-based registry was initiated at Employees State Insurance Corporation (ESIC) Model Hospital, Ahmedabad situated in highly industrialized state in India.

Material and Methods The study involves hospital-based surveillance for disease and injuries among admitted (In-Patient Department) workers at ESIC hospital. The paper-based registry was initiated in December 2018 at ESIC Model Hospital,
Ahmedabad which is administered by Employees’ State Insurance Corporation, Ministry of Labour. The data was collected from 600 workers using a pre-structured questionnaire.

Results & Conclusion Maximum hospitalizations of workers were related to respiratory (34.83%) and cardiovascular (12.33%) illnesses. Nearly 10% workers reported with problems related to musculoskeletal disorders (MSD), among whom lower back pain was the highly prevalent problem. Injury (non-fatal) at the workplace was recorded as 6.6% among hospitalized workers. Most of the injuries were in form of bone fractures (42.50%) of lower extremities and burns (22.50%) while performing duties at workplace. The median absenteeism for the hospitalized workers was found to be 11 (1, 41) days. Data revealed that compliance and knowledge of safety measure was low among injured workers, nearly half of injured workers were not using safety gears or had proper knowledge of preventive measures. These workers were engaged in work continuously for more than 8 hours before injury. A large number of hospitalized workers reported a noisy environment (60.16%) at workplace, and nearly 65.50% workers reported the presence of dust/odour/smoke, and excessive heat at work environment.

Covid 19

**O-30** THE IMPACT OF OCCUPATIONAL EXPOSURE ON THE INFECTIONS RATES WITH SARS-COV-2 IN THE NETHERLANDS

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Introduction This study aimed to investigate the role of occupational exposure in the risk to be infected with Sars-Cov-2, and whether this differs across waves, while correcting for non-work related factors.

Methods Data from 207,034 workers from the Netherlands with test data on Sars-Cov-2 from June 2020 until August 2021 were available. Personal characteristics and living conditions were derived from Statistics Netherlands. Occupational exposure was estimated by using the COVID-19 JEM. A test-negative design was applied in which the risk for a positive test was analyzed in a conditional logit model for the entire period.

Results Nine percent of tests were positive during the entire study period and three separate waves. Differences were found across waves. A large number of hospitalized workers reported a noisy environment (60.16%) at workplace, and nearly 65.50% workers reported the presence of dust/odour/smoke, and excessive heat at work environment.

**Musculoskeletal disorders**

**O-308** COMPARATIVE ASSESSMENT OF MUSCULOSKELETAL PAIN AMONG ARTISANS OF THREE HANDICRAFT SECTORS OF INDIA BECAUSE OF COMMERCIALIZATION – A STUDY ON UNORGANIZED SECTOR

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Introduction Demand of Indian handicraft products is increasing consistently over the last couple of years globally due to its uniqueness and beauty. Handicraft sector is the second largest employment generator after agriculture in India. The sector functions on self-sustaining business model. According to official record, India is home to 7 million artisans. With the advent of online portals and government initiatives there is a bolstering market growth of handicraft sector which lead to rapid change in the work culture from domestic to commercialization. Work practice has changed but the workplace and workstations remain the same. Long duration of work, in traditional work environment led to the development of musculoskeletal problems among the artisans. The present study was conducted on three handicraft sector of India, hand-block textile printing, Bell metal handicraft and marble carving sector to find out the effect of commercialization on occupational health of the artisans.

Method 10 artisans each from three sectors: Bagh print, Dhokra handicraft and Bedaghat soft marble carving were selected for the study. A modified Boston hand evaluation questionnaire was used to measure the hand symptoms for occupational musculoskeletal risks. Direct observation was further used to understand the risk involved in the task.

Results Artisans working in Bagh print reported significantly higher percentages of symptoms of Lost sensitivity and tingling, whereas artisans working in Dhokra handicraft had higher reports of weakness than the other two occupations. Pain during working hours were seen among all the three occupational groups, with the highest reports among marble carving artisans.

Conclusion High symptoms of hand pain were seen in all the three sectors involving repetitive intricate tasks. The symptoms of lost sensitivity were seen to be associated with high force exertion which was seen among the artisans of Bagh print and marble carving.

Covid 19

**O-309** RISK FOR HOSPITALIZATION DUE TO COVID-19 IN RELATION TO OCCUPATIONAL EXPOSURES AS ESTIMATED BY TWO DIFFERENT JOB-EXPOSURE MATRICES

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Introduction This study aimed to investigate the role of occupational exposure in the risk to be infected with Sars-Cov-2, and whether this differs across waves, while correcting for non-work related factors.

Methods Data from 207,034 workers from the Netherlands with test data on Sars-Cov-2 from June 2020 until August 2021 were available. Personal characteristics and living conditions were derived from Statistics Netherlands. Occupational exposure was estimated by using the COVID-19 JEM. A test-negative design was applied in which the risk for a positive test was analyzed in a conditional logit model for the entire period.

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