

(Particulate Matters) in the history reached 1000 $\mu\text{g}/\text{m}^3$ (Chang, 2009). China's rapid industrial growth has led to steep increases of air pollutant emission. In addition to high increases in the density of PM₁₀ during the dust storms, mercury, copper, sulfur dioxide, sulfates levels have become more prominent in long-range transport of air pollutants. In comparison of daily dioxin level to the day of sand storm, the level has almost double in PCDD/F content (Chi et al., 2008). Chang et al. (2009) indicated that the concentrations of atmospheric PCDD/F and mercury could be as high as 69.8 fg-I-TEQ/ m^3 and 4.18 ng/ m^3 , respectively, during the Northeast monsoon episode. It reveals that the importance of hazardous atmospheric pollutants concentration via long-range transports in air quality management and health concern. Studies between 2003-2004 (Wu et al., 2007; Wu et al., 2004) indicated that there is also a higher density of fungus in Northern part of Taiwan during sand storms, including Non-sporulating Fungi, Cladosporium, Penicillium, Aspergillus and Curvularia. Some species have been found to only exist when sand storm attacked: such as Botrysporium and Trichothecium. Several studies indicated that the presence of sandstorms may be associated with increased risk of hospital admissions or even increase more respiratory death cases. Exposure to ambient air pollution may be associated with increased risk of respiratory and cardiovascular hospital admissions in Taipei and other regions with similar air pollution episode (Chen et al., 2004, Yang et al., 2005, Chan et al., 2008, Bell et al., 2008). How to prevent the sand storms impact the environmental and human health in Taiwan become a major issue in policy decision process for the Government. *The views expressed in this paper are author's and do not reflect official positions of the Taiwan Environmental Protection Administration.

Oral Track 24- Occupational & Environmental Health

OT24-1

Rising Concerns of Occupational Health in Mongolia: Analysis of Incidence Rates of Occupational Diseases During 1986-2006

Shagdarsuren Oyunbileg¹, Jung-Der Wang¹, Nyamjav Sumberzul², Lkhaasuren Oyuntogos², Jamsranjav Javzmaa³

1. National Taiwan University, Taiwan

2. Health Science University of Mongolia, Mongolia

3. Sanatorium and Rehabilitation Centre for Occupational Diseases, Mongolian-Russian "Erdenet" CoLT, Mongolia

Objective: The industrialization of Mongolia over the last two decades has raised a concern on occupational health. The purpose was to determine the incidence rates and time trends of major occupational diseases in Mongolia.

Method: We retrieved information from all 4598 patients who were diagnosed and registered as having occupational diseases by the National Research Center of Workplace Condition and Occupational Diseases (NRCWOD) in Mongolia during 1976-2005.

Results: The annual incidence rate per million person-years of occupation-related respiratory diseases (ORD) was increased by almost 2 times, musculoskeletal diseases by 5 times, and skin diseases by 4 times during the study period. Pneumoconiosis decreased slightly, but asthma and dust related chronic bronchitis nearly tripled. Although the cumulative incidence rates in workers aged 30-59 years (CIR30-59) of ORD have been decreasing from 8.03% to 2.90% per year in the workers with high-exposures, total numbers of newly developed ORD has increased about 3 times, indicating more people employed in such industries and the need for proactive prevention. Moreover, the incidence rates of ORD for the non-exposed and low-exposed workers also increased.

Conclusion: Numbers of occupational diseases have increased during the last two decades because of expanded employment in industrial sectors. Actions must be taken immediately to allocate more resources for the development of health manpower on early recognition and prevention of occupational diseases, establishment of a comprehensive hazard communication system, and the enforcement of all regulations.

OT24-2

Birth Month, Mold, and Risk of Atopic Dermatitis in Early Infancy

Chi-Hsien Chen, Bing-yu Chen, Leon Guo

National Taiwan University, Taiwan

Background: Several studies have found the association between month of birth and the development of allergic diseases. Knowledge concerning the effect of the interaction between perinatal indoor conditions and seasonality on atopic dermatitis is limited.

Objects: To evaluate the seasonality of atopic dermatitis (AD) in Taiwan and find out the potential lead role of indoor conditions in the effect of seasonality

Methods: 21248 infants born in 2005, who had participated in the Taiwan Birth Cohort Study, were evaluated at 6 months of age by questionnaires completed by their parent or caregivers. Multivariate logistic regressions were used to adjust gestational age, maternal age, gender, parental education, family income, and parental atopic history. Two stage analysis was used to calculate adjusted incidence of AD in each month of birth.

Main Result: Total 1467(6.9%) infants had atopic dermatitis before six months of age. Month-of-births distribution of AD children was significantly different from non-AD references. In AD children, month-of-births distribution of AD children with mold on wall in their house was significantly different from those living without mold. After adjustment, fall, summer, and winter pose higher risks of AD compared to