

Median age of FLD diagnosis was 35 (IQR 25–43, range 16–62), with a median latent period from first farm exposure of 28 years (IQR 20–42).

Discussion The prevalence of FLD in this British cohort (representing over 1% of British farmers) was in keeping with that reported from other countries. Age of diagnosis was very variable, with the majority of those affected having never smoked. Although most had worked on a mixture of farm types, workers with FLD were more likely to report only having lived on an animal versus cereal production farm

450 EXPOSURE TO CRYSTALLINE SILICA AND LUNG FUNCTION IN OUTDOOR ROCK DRILLERS

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Introduction A number of tasks in heavy construction generate crystalline silica dust, which is a significant contributor to occupational mortality and morbidity. When a new heavy construction site is established, first excavators come to clear the soil. Thereafter holes are drilled to prepare for blasting. There is a lack of knowledge regarding exposure levels of dust and crystalline silica among rock drillers and blasting workers generated by these work tasks. Exposure to dust and crystalline silica are suggested to cause obstructive and restrictive lung changes.

Methods The study is designed as a two years follow-up of 132 rock drillers and 50 referents (administrative personnel) working in the same construction companies, but without airborne occupational exposure. All subjects were examined with lung function tests and blood was collected during the winter 2015/2016. They will be re-examined in 2017/2018. Pneumoproteins and markers of inflammation are currently being analysed.

Eighty-three rock drillers using different drilling rigs carried air-sampling equipment for the determination of respirable dust and crystalline silica.

Result Preliminary results show: The exposure to dust and crystalline silica in the respirable aerosol fraction ranged from 0.01 to 2.91 mg/m³, and from 0.002 to 0.45 mg/m³, respectively, depending on type of drilling equipment in use. Workers using drill rigs with feed mounted operation panels were most highly exposed.

Compared with the referents at baseline the rock drillers had significantly lower forced vital capacity (FVC)% predicted (p=0.012) and forced expiratory volume in one second (FEV₁)% predicted (p=0.001). The decline in FEV₁/FVC (Tiffeneau index) was associated with years of exposure (p=0.017) and smoking (pack years) (p=0.02). The serum concentration of CRP was comparable between the two groups.

Discussion Exposure to crystalline silica during rock drilling may have negative impact on the lung function.

1677 CHEST CT SCANNING IN THE SCREENING, SURVEILLANCE, AND DIAGNOSIS OF OCCUPATIONAL LUNG DISEASES

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Aim of special session Advances with chest CT scanning and CT scan-based lung cancer screening are changing the way diagnosis and screening for occupational lung diseases are conducted. We plan to review existing methodologies and experience-based emerging strategies.

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1677a INTERNATIONAL CLASSIFICATION OF HRCT FOR OCCUPATIONAL AND ENVIRONMENTAL RESPIRATORY DISEASES: DESCRIBING NON-MALIGNANT AND MALIGNANT ASBESTOS RELATED DISEASES

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ILO Classification of Radiograph of Pneumoconioses (ILO/ICRP) has played an important role in screening and surveillance of pneumoconiosis among dust exposed workers worldwide. As the ILO/ICRP has semi-quantitative scheme, it allows objective and standardised recording of radiographic findings on chest radiographs of workers. The International Classification of HRCT for Occupational and Environmental Respiratory Diseases (ICOERD) have been proposed from International Expert Team consists of researchers from 7 countries, based on the consensus report at the Helsinki Meeting for Asbestos related diseases in 2000. The ICOERD system covers all aspect of Occupational and Environmental Respiratory Diseases, starting with six parenchymal findings and two pleural abnormalities. Parenchymal findings include well-defined rounded opacities, irregular opacities, inhomogeneous attenuation, honeycombing, emphysema and large opacities. Irregular opacities include intralobular opacities and interlobular opacities, the former include centrilobular opacities suggestive of inhalation diseases. The ICOERD classifies these parenchymal findings in 4-point-scale, grading 6 lungs zones. Consequently, the final grade for each of the parenchymal findings sums up to 18-point-scale. Pleural abnormalities cover pleural thickening of parietal and/or visceral types. Width and extent of pleural thickening is graded in 4-point-scale. As multi-detector CT can be used for screening of non-malignant and malignant diseases, the ICOERD added supplemental coding for mesothelioma, which allows standardised recording of findings suggestive of mesothelioma. CT findings of unilateral pleural effusion, nodular pleural thickening, mediastinal pleural thickening, interlobar fissure thickening, diminished lung, contracted hemithorax should be noticed when reviewing CT scans of asbestos-exposed persons.

1677b EXPERIENCE WITH THE ICOERD CLASSIFICATION IN WTC LUNG DISEASES

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