

SHC 47 . HRCT AND PULMONARY FUNCTION FINDINGS OF OCCUPATIONAL ARSENIC EXPOSURE IN WORKERS

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The numbers of studies where nonmalign pulmonary diseases are evaluated after occupational arsenic exposure are very few. Objective: The aim of this study is to show the effects of occupational arsenic exposure on the lung by high-resolution computed tomography (HRCT) and pulmonary function tests (PFT).

In this study 256 workers who were suspected respiratory occupational arsenic exposure are included, having average age 32.9 ± 7.8 years and working 3.5 ± 2.7 years averagely. Hair and urinary arsenic levels are analysed. HRCT and PFTs are done.

In workers having occupational arsenic exposure HRCT showed 18.8% pulmonary involvement. In pulmonary involvement, pulmonary nodule with 64.5% was the most frequently seen lesion the other findings of pulmonary involvement were 18.8% diffuse interstisiel lung disease, 12.5% bronchiectasis, 27.1% bullae-emphysema. The mean age of patients having pulmonary involvement was higher and as well they were smoking more. The pulmonary involvement was 5.2 times more in patients having skin lesions because of arsenic. Diffusing capacity of lung for carbon monoxide (DLCO) was significantly lower in patients of pulmonary involvement.

Besides lung cancer, chronic occupational inhalation of arsenic exposure can cause non malign pulmonary findings as bronchiectasis, pulmonary nodule and diffuse interstisiel lung diseases. Because of this, to detect the pulmonary involvement in the early stage, workers having occupational arsenic exposure should be followed by diffusion test and HRCT.

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