formation of collagen. Prolidase catalyses the hydrolysis of oligo/dipeptides which contains proline or hydroxyproline in the carboxyl terminal position. Many studies have identified prolidase activity at varying levels in fibrotic diseases. The aim of the study is to investigate the relationship between silicosis and prolidase activity.

Methods This study is a cross-sectional study. We reviewed medical records (functional status and radiological findings) and serum prolidase levels of 62 patients who were admitted to our centre between September and December 2015.

Result All cases were male and silicosis was diagnosed in 37 (%) of 62 cases. Prolidase level was significantly higher in patients with silicosis than in normal ($p<0.001$) (4877 ±2324 vs 815±520). Correlation analysis showed significant positive correlation between prolidase activity and ILO classification (r:0,723, p<0,001, figure 1A) and age (r: 0,391, p:0,002). Prolidase activity was negatively correlated with FEV1 (r:−0.332, p: 0.008) and FCV (r:−0.295, p:0.020).

Discussion Since prolidase is involved in collagen metabolism, its activity can be used for early diagnosis and follow-up of silicosis. Further studies are needed to clarify the etiopathogenetic mechanisms of silicotic nodule formation and early detection of vulnerable population who had silica exposure before nodule formation.

242 PNEUMOCONIOSIS AMONG DENTAL TECHNICIANS

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Introduction Dental technicians are exposed to various chemicals, including silica particles and metals. The aim of this study is to explore the pneumoconiosis risk among dental technicians.

Methods This is a cross-sectional study. We reviewed medical records of patients diagnosed with pneumoconiosis who were admitted to outpatient occupational disease centre between 2013 and 2015. Pneumoconiosis was diagnosed by X-ray radiograms in accordance to ILO procedures and with High Resolution Computarized Tomography (HRCT).

Result Pneumoconiosis was diagnosed in 46 (65.7%) of the 70 dental technicians who were referred to our hospital. There were 45 (97.8%) male and 1 (2.2%) female cases. Radiologically, 16 cases were defined as 2/3 or more of profusion and 11 cases had large opacity. In 3 (6,5%) cases who had profusion 0/1, The most frequent findings are micronodules and lymphadenopathy in HRCT. Consolidation, conglomerate masses and ground glass opacities are also described alongside the reticular opacities. There was a poor correlation between pulmonary function tests and profusion, (correlation coefficient were between: −0,18 and −0,058). There was no correlation observed between profusion and age started to work and exposure duration.

Discussion The study showed that pneumoconiosis among dental technicians is a great risk. Especially sandblasting procedures is raise the risk of pneumoconiosis. This shows that there are serious limitations in control measures and employee' health monitoring.

996 RETROSPECTIVE STUDY OF THE PULMONARY FINDINGS IN COMPLEMENTARY EXAMS IN RETIRED MINING WORKERS EXPOSED TO ASBESTOS

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Introduction Asbestos, a silicatum largely used in industry is responsible to harmful effects to the respiratory system, once inhalation and fibre accumulation of these materials in the pulmonary parenchyma are associated to pleural and pulmonary injuries. The objective of this study is to find the most prevalent pulmonary changes evaluated in asbesto's exposed workers and verify if there is any risk factor associated.

Methods This was a cross-sectional study which evaluated 48 retired workers exposed more than 15 years to asbestos at aluminium mining industry at Poços de Caldas – Brazil. The workers were evaluated between June 2015-July 2016 and submitted to a structured analysis for data collection including: gender, age, smoking load, chest X-ray, chest computed tomography (CT), and spirometry (divided in normal, mild, moderate and severe alterations). The CT was applied in workers who had shown clinic, radiographic and spirometric alterations. It was applied Chi-Square method, p<0,05 using One-Way ANOVA and Tukey test.

Results All workers were male, mean age of 64 years-old. The mean FEV1 was higher in non-smokers group (95%) in comparison to ex-smokers group (88%) and smokers (82%). The FEV1 decay was proportional to smoking load increase; FVC lowest values were found in the smokers group (mean of 78%) and increasing FVC values in ex-smokers and non-smokers group. Lung emphysema and diffuse bronchial injury were the most prevalent findings, shown on 8 and 7 workers respectively. Only 2 workers presented pleural plaques.

Discussion The results suggested that smoking is an important risk factor for functional lung injuries, enhancing the harmful effects of asbestos chronic exposure. These data may contribute with strategies to enhance smoking cessation and preventive respiratory disease programs within the mining industry in order to prevent pulmonary injuries. These measures may possibly decrease the risk for developing lung diseases associated in asbestos' exposed mining workers.

639 UNDER-REPORTED ASBESTOS-RELATED LUNG CANCER IN TAIWAN

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Introduction Mesothelioma is a rare malignancy, primarily caused by exposure to asbestos. The incidence rate of mesothelioma in Taiwan increased steadily in the previous two decades. However, very few of the mesothelioma patients received compensation due to their asbestos-related work. This study aims to examine the status of reported and unreported asbestos-related lung cancer, particularly mesothelioma in