

# Progressione radiologica e funzionale nella silicosi

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## KEY WORDS

Silicosis; pneumoconiosis progression; pulmonary function; chest radiographs

## SUMMARY

**«Radiological and functional progression in silicosis».** Background: *The incidence of silicosis has decreased today because of a clear improvement of working conditions. According to recent data from Italian National Compensation Agency (INAIL) silicosis represents more than 5% of occupational diseases claimed for annually. Since silicosis is an evolving chronic disease, it has serious consequences on patient health, modifying the quality of life and increasing public costs. Some studies show a relationship between occupational exposure to silica and radiological and functional deterioration, but the results are not satisfactory because of the variety of clinical patterns and the interference of many risk factors.* Objectives: *The aim of our investigation was to evaluate silicosis evolution in relation to living habits and to different occupational exposures.* Methods: *All admissions from 1980 to 2000 in the Occupational Medicine Unit of the Maugeri Foundation in Cassano Murge (Bari), Southern Italy, with final diagnosis of silicosis were examined. From 586 medical records gathered, subjects with double admissions were selected and their chest radiographs and FVC, FEV1 from lung function test were detected. No industrial hygiene data were available and individual exposure was estimated through calculation of a global exposure index.* Results: *On the basis of data quality control, 106 consecutive male patients were recruited (age at first admission 51.7±8.3 years, occupational exposure at second admission 23.8±9.1 years). More than 50% of the subjects had an estimated high risk exposure at work. The first diagnosis of silicosis was made at first admission in 40% of the cases, 33% of the patients had been suffering from silicosis for 10 years while 27% for more than 10 years. Chest radiographs showed mostly p, q nodular pattern, and over a 4.7±3.3 year follow-up period they appeared largely unchanged, although 8 radiographs showed confluent areas, 18 subjects showed pleural thickening, 10 calcified opacities, 17 COPD (Chronic Obstructive Pulmonary Disease) with emphysema, 2 tuberculosis lesions, 4 radiographic abnormalities attributable to cancer (3 lung, 1 oesophageal).* Conclusions: *The mainly stationary results of chest radiographs and the slight loss of respiratory function we observed confirm the slow evolution over time of silicosis. Multiple logistic regression analysis of main risk factors showed that subjects with radiographic opacities having a diameter greater than 10 mm or conglomerate shadows at the time of diagnosis seem to have a lower risk of progression of the disease after a relatively short period of follow up, even in mining related exposure.*