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1 Background, aims and design of study

Silicosis is a common problem in Hong Kong and affected patients are compensated according to recommendation made by the Pneumoconiosis Medical Board. The assessment of respiratory “incapacity” in silicosis is a difficult subject and is a topic of intense political and social concern. There is, as yet, no gold standard for assessing incapacity nor recommending industrial compensation for sufferers of silicosis. Currently the Hong Kong Pneumoconiosis Board assesses the degree of incapacity (DOI) of these patients by measuring the forced vital capacity percentage (FVC%) which might be an over-simplification. Other industrialised countries such as the United Kingdom also employed similar clinical, radiological, and lung function indices to assess the incapacity of these patients, at least as far as industrial compensation is concerned. Medico-legally, the assessment of compensation for damages usually includes assessment of pain and suffering; loss of life expectancy; loss of future earning due to incapacity; and loss of earning due to possible early death (the “lost years”). It is well known that lung function indices, symptoms, or other clinical assessment of silicosis patients often only reflect the degree of lung function impairment rather than the virtually un-quantifiable respiratory incapacity. It would be of great clinical and social interest to determine the correlation between various clinical, radiological, lung function, and quality of life parameters with the FVC% of silicosis patients. This protocol has therefore been designed to look into the above parameters in silicosis in Hong Kong and determine whether or not these correlation studies can help assess incapacity in silicosis on the local patient populations.

The aims of the current study was to evaluate the intercorrelation amongst the following meaningful clinical parameters:

1. Age
2. Lung function
3. Exercise testing parameters
4. Quality of life indices
5. Borg's scale of breathlessness

in patients with proven silicosis which is diagnosed as per standard protocol at the University Department of Medicine. The diagnostic criteria are the presence of the following three conditions:

1. History of significant exposure to silica
2. Compatible chest radiographic abnormalities
3. Absence of diseases which mimic radiographic features of silicosis