

BFF, RS and PSMcN conceived the project. All authors contributed to the final version of the manuscript.

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Journal club

Lung volumes in interstitial lung disease in smokers

There is increasing awareness that smoking causes emphysematous changes and increased lung density in the form of interstitial lung abnormalities demonstrated on high-resolution CT (HRCT). This study investigates the prevalence and effect of these radiological changes on spirometry in patients with and without chronic obstructive pulmonary disease (COPD).

A total of 2416 HRCT scans of smokers between the ages of 45 and 80 years with a greater than 10-year pack history were evaluated. The presence of interstitial lung disease was defined as non-dependent changes affecting more than 5% of any lung zone.

Interstitial changes were present in 194 (8%) of the scans evaluated. These patients were shown to be older and have an increased BMI and greater amount of exposure to tobacco. Patients with interstitial lung disease were less likely to have COPD and had a decreased percentage of emphysema and total lung capacity. The patients with defined COPD and interstitial lung changes were more likely to have decreased emphysematous changes and total lung capacity compared with patients having only interstitial lung disease.

There was an inverse association between interstitial lung abnormalities and the severity of COPD. The authors suggest that this could result in erroneous underestimation of emphysema and that HRCT could be a valuable diagnostic test in smokers who unexpectedly have normal spirometry when compared with their other symptoms.

► Washko G, Hunningshake G, Fernandez I, et al. Lung volumes and emphysema in smokers with interstitial lung abnormalities. *N Engl J Med* 2011;**364**:897–906.

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