

PLEURAL ABNORMALITIES PREDATING MESOTHELIOMA DEVELOPMENT

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Background

Mesothelioma is an aggressive tumour closely related to asbestos exposure. Asbestos is known to cause benign pleural thickening, effusion and plaques and the majority of subjects with these abnormalities do not develop mesothelioma. This study aimed to describe the range of pleural abnormalities seen on CT done at some time before the diagnosis of mesothelioma was made.

Methods

Electronic radiological records of all patients who were diagnosed with from 2009 till June 2017 were screened for any chest CT obtained at least 6 months prior to the CT that triggered the diagnosis of mesothelioma. CTs were examined for the presence of **plaques**, **thickening**, **nodules** and/or **effusion**. CT studies were divided into 3 time periods:

- within one year (A) of diagnostic CT,
- 1-3 years before (B), and
- more than 3 years (C) before the diagnostic CT.

Results

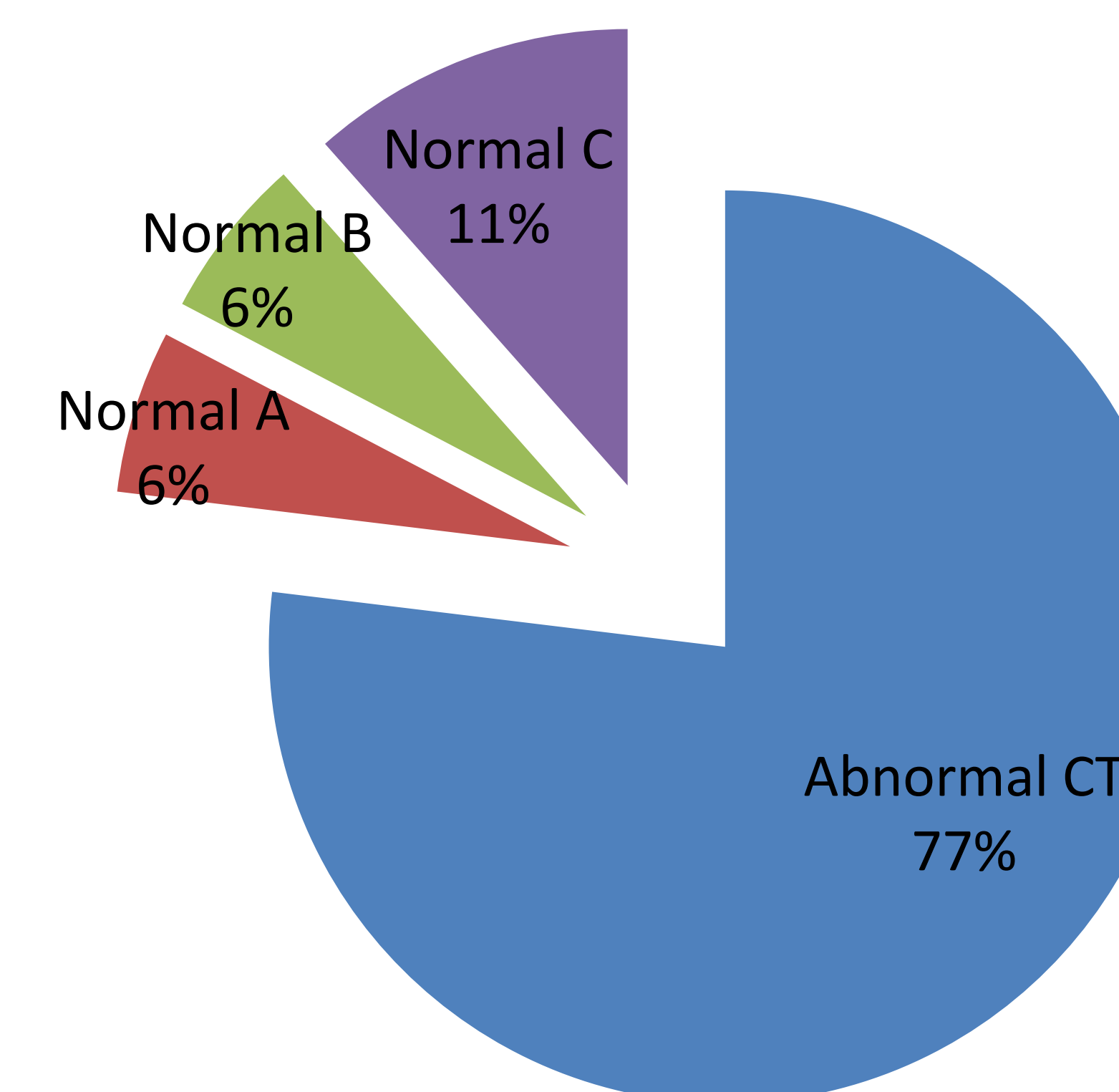
170 patients were screened. 38 patients had one or more pre-diagnosis CTs. A total of **52 CTs** were available for comparison. 12 studies (23%) did not show any pleural abnormality (3 studies in period A, 3 in period B and 6 in period C)

Effusion was the most common abnormality seen in 44% of CTs followed by thickening seen in 33%, then plaques 29%)and pleural nodules in 10%.

Conclusions

Mesothelioma is a rapidly progressive disease that can be difficult to track in radiological studies done before clinical presentation. Pleural effusion, followed by smooth thickening and plaques, are fairly common abnormalities in pre-diagnosis CTs.

% of abnormal CTs and normal CTs at different time points



Percentages of abnormalities in studied CTs at different time points

