

the prevalence of bronchitis, and this may be relevant to the disability caused by asbestosis.

The epidemiological usefulness of examinations of sputum for asbestos bodies and fibres is at present uncertain but needs investigation.

(c) Classification of Chest Radiographs of Asbestos-exposed Individuals

There is no international or national standardized classification of the radiological appearances of asbestosis. It is recommended that a scheme based if possible on an extension of the I.L.O. Classification (1958)² be developed. The aim should be to specify separately and record semiquantitatively the principal radiological features seen in asbestos-exposed groups, but exposure to mixed types of dust is not uncommon and the appearances may, therefore, include those caused in part by other pneumoconioses.

It is recommended that a working group be set up to develop and test a new international classification.

(d) Lung Function Assessment

The preferred lists of lung functions to be used will vary according to the type of survey and the facilities available. A list of minimal and additional tests likely to be of use is as follows:

Minimal

- Forced vital capacity (F.V.C.)
- Forced expiratory volume over 1 sec. (F.E.V._{1.0})

Additional

- Transfer factor (diffusing capacity) of lung for carbon monoxide—single breath method
- Lung compliance
- Standard exercise test
- Peak expiratory flow
- Airways resistance

RECOMMENDATIONS ON PATHOLOGY AND EXPERIMENTAL PATHOLOGY

1. Diagnosis of Asbestosis

(a) Macroscopic Examination

At necropsy the parietal pleura should be stripped if possible with the thoracic contents. It is desirable that at least one lung be inflated with fixative and whole lung sections be prepared.

It is recommended that special note be made of the following:

Pleura: for thickening and plaques (defined as localized areas of stiff hornlike material³). The site and size of all pleural lesions should be recorded.

Lungs: The presence of interstitial fibrosis, bronchiectasis, cystic change, tuberculosis, pneumonic consolidation and tumours. The site of any tumour should be recorded as precisely as possible.

Mediastinal tissues should be examined for evidence of neoplastic infiltration and for tuberculosis.

Peritoneum: Parietal and visceral fibrosis in the peritoneum, such as parietal plaques and "sugar-icing" of the spleen, should be recorded.

(b) Microscopic Examination

It is recommended that at least six sections be examined from the lungs before the degree of asbestosis is decided and these blocks should be taken from specific sites and identified in the following standard manner:

1. Apex of right upper lobe, pleural surface.
2. Right middle lobe, lateral pleural surface.
3. Right lower lobe, middle of basal surface.
4. Left upper lobe, central section.
5. Lingula, central section.
6. Left lower lobe, central basal section.

In addition, sections should be taken from the bronchi and peritracheal and peribronchial lymph glands, and from any suspicious or abnormal tissue.

(c) Assessment of the Severity of Asbestosis

It is recommended that this assessment should be based on the severity of interstitial fibrosis and the amount of tissue involved. The proposed scheme is as follows:

EXTENT OF LUNG INVOLVEMENT	DEGREE OF ASBESTOSIS	DEGREE OF INTERSTITIAL FIBROSIS
Slight	Slight	Slight
Moderate	Moderate	Moderate
Marked	Marked	Marked

A category of "minimal" asbestosis is also proposed to describe slight focal fibrosis in the region of the respiratory bronchioles associated with the presence of asbestos bodies; such changes are commonly confined to sections taken from the bases of the lower lobes.

This scheme puts more emphasis on the extent of the lesions than the degree of fibrosis (which should be averaged for the six sections). Thus, a lung with moderately extensive disease but only slight severity of fibrosis is graded as "moderate asbestosis". The use of an average assessment of the six sections makes it impossible to have a grading of slight involvement and moderate or marked degree of fibrosis.

(d) The Detection and Significance of Asbestos Bodies and Fibres

Sputum

The presence of asbestos bodies and fibres is an indication of the exposure to asbestos dust and not evidence of asbestosis. It is therefore suggested that