The Agency for Toxic Substances and Disease Registry (ATSDR) is a federal public health agency of the U.S. Department of Health and Human Services and is based in Atlanta, Georgia. ATSDR's mission is to serve the public using the best science, taking responsive public health actions, and providing trusted health information that will prevent harmful exposures and disease related to toxic substances.

Clinical Screening Guidelines for Asbestos-Related Lung Disease

Introduction

A physician with expertise in the evaluation and management of asbestos-related lung diseases should screen patients who are now or have been in the past:

- Workers involved in:
  - mining of asbestos or minerals contaminated with asbestos; or
  - manufacturing or using asbestos-containing products
  - custodial and maintenance and repair work in asbestos-containing buildings
  - direct contact with asbestos-containing waste or dust emissions
- People:
  - living in the vicinity of asbestos mines and asbestos-related industries such as a vermiculite processing plant
  - direct contact with asbestos-containing waste or dust emissions

Medical History

The medical history interview should include:

- Reason for visit
- Past medical history
  - Include general respiratory, tuberculosis, lung infection and cardiac history, rib fracture, thoracic surgery
- Current respiratory health history
  - Progressive dyspnea on exertion, dry cough, fatigue, weight loss, tachypnea at rest
- Smoking history
  - Include history of past attempts and/or willingness to quit, need for intervention
- General asbestos exposure history
  - Any direct contact with asbestos
  - Source, intensity, and duration of exposure
  - Age at first exposure and years since first exposure
- Occupational exposure history
  - Asbestos and other chemical exposures on the job or from hobbies
  - High-risk occupations fields such as construction, demolition, remodeling, mining, and shipbuilding
  - Source, intensity, and duration of exposure
  - Age at first exposure and years since first exposure

Comprehensive physical examination

- Auscultation of heart and lungs
- End-inspiratory basilar rales
- Abdominal examination
- Extremity examination (including clubbing, pulses, peripheral edema, and cyanosis)

PA chest radiograph

Note that radiological evidence is typically not present until at least 5 years after first exposure. In addition to a clinical evaluation, the use of a B-Reader is recommended for radiographic rating of lung changes. The radiograph reader should look for

- Pleural changes
  - Thickening and possible calcification of the parietal and visceral lung pleura
  - Benign pleural effusion
- Interstitial changes
  - Small, irregular opacities in lower lung fields, "ground glass" appearance
  - Diffuse, bilateral interstitial fibrosis
- Lung carcinoma/pulmonary nodules

Simple pulmonary function test (PFT or spirometry)

- Include FVC, FEV1, and FEV1/FVC ratio
- Asbestosis and some diffuse pleural disease may be characterized by restrictive changes. Among smokers, a mixed pattern may be noticed.
- Consider pre- and post-bronchodilator, especially if obstructive component is evident.

Criteria for further evaluation

- If x-ray is normal or inconclusive and exposure history is positive, repeat X-ray in subsequent years as needed. Lateral and/or oblique view recommended for inconclusive pleural changes.
- Consider referring patients with possible restrictive lung disease, significant radiographic or pulmonary function abnormalities, or those with uncertain significance, to a pulmonary specialist for complete pulmonary function tests and further evaluation.
- CT scan: NOT a screening tool; recommended only if exam/PFT results suggest disease but x-ray does not correlate or if findings of uncertain significance are found on chest x-ray.
- CT may assist in differentiating pleural plaques from soft-tissue densities, cancer versus rounded atelectasis.

Some of the information is from the Minnesota Department of Health's Clinical Screening Guidelines for Asbestos-Related Lung Disease