

Memory of World War II with loud atypical friction rub due to pulmonary asbestosis

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DESCRIPTION

An 87-year-old healthy woman was admitted to our hospital with progressive dyspnoea on effort since the preceding 6 months. She had a history of total gastrectomy, performed 5 years earlier. She was a non-smoker and worked as a business manager.

She did not abuse drugs. During World War II, when she was 15 years old, she worked for a year in a factory manufacturing the brake pads of fighter planes using copious amounts of asbestos. Physical examination revealed the presence of a 'hard and high-pitched knocking sound during the early inspiratory phase', in the right middle to lower lung fields, anteriorly (online supplementary video).

A chest radiograph showed massive calcifications in both lungs, including at the level of the diaphragm (figure 1A). Thoracic CT confirmed that these calcifications corresponded to the deposition of massive pleural plaques (figure 1B, C), especially in the visceral pleura (figure 1C), just above the level of the bilateral diaphragm, suggestive of pulmonary asbestosis.¹

The asbestos exposure period was about 1 year; however, she remembered the following: (1) there

Learning points

- Huge pleural plaques can be the result of an intense exposure to asbestos, even if the inhalation period is short.
- A hard and high-pitched knocking sound during the early inspiratory phase seemed to be derived from the contact of pleural plaques and was the atypical sound of a pleural friction rub.
- Thoracic radiological findings of pulmonary asbestosis are characterised by the presence of pleural plaques at the lung bases.

were no preventative measures, including masks or gloves, for asbestos exposure in the military factory; and (2) occasionally, there would be numerous asbestos fibres, shimmering in the sun, attached to the skin of both forearms. Taken together, this information suggested that the massive pleural plaques were caused by an inhalation of abundant asbestos, manifesting as atypical pleural friction rub on auscultation and resulting in restrictive ventilatory impairment with type II respiratory failure (Pco₂ of 50 mm Hg).

Contributors T Shirai and T Saraya wrote the manuscript. T Saraya, MO and HT analysed the lung sounds. All authors including MO and HT managed the patient.

Competing interests None declared.

Patient consent Obtained.

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REFERENCE

- 1 O'Reilly KM, McLaughlin AM, Beckett WS, et al. Asbestos-related lung disease. *Am Fam Physician* 2007;75:683–8.

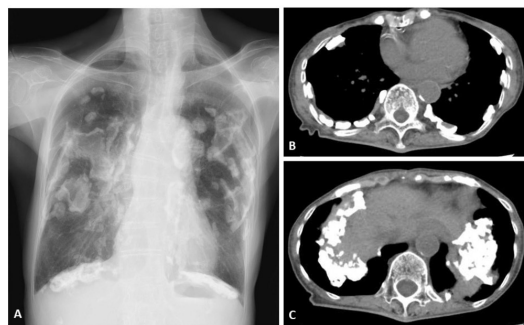


Figure 1 Chest radiograph showing the massive calcification of the whole lung bilaterally (A), which is consistent with the accumulation of abundant pleural plaques (B, C) and predominantly seen at both lung bases.



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