Intrapleural lipoma mimicking a lung cancer

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Learning Point for Clinicians

Lung malignancy is the most important differential in unexplained CXR lesions especially in heavy smokers. However, it is also important to consider benign disorders and intrapleural lipoma should be considered when the lesion is very fatty on CT. This can potentially avoid unnecessary invasive investigations and alleviate patient anxiety.

Case history

A 62-year-old retired railway worker with a 40 pack year smoking history and possible asbestos exposure presented with his usual angina pain and a more chronic history of predictable effort dyspnoea and morning cough but with no weight loss or haemoptysis. He had a past history of chronic obstructive pulmonary disease (COPD), Parkinson’s disease, ischaemic heart disease, peripheral vascular disease, epilepsy and depression. Examination was non-contributory but for signs of Parkinson’s disease and COPD.

Spirometry revealed an obstructive pattern with a forced expiratory volume in 1 s (FEV₁) of 1.6 l (54% predicted), forced vital capacity (FVC) 2.3 l (61% predicted) and an actual FEV₁/FVC ratio of 70%. A chest radiograph (CXR) showed an apparent mass in the left lung field (Figure 1a). Blood tests were essentially normal with a white cell count 7.8 x 10⁹/l, haemoglobin (Hb) 132 g/l, C-reactive protein 24 mg/l and troponin of <14 ng/l. An electrocardiogram showed normal sinus rhythm with no ischaemic changes. In view of the smoking history and concern of a lung cancer, a computed tomography (CT) scan of the thorax and upper abdomen (Figure 1b) was performed that revealed a pleural-based fatty lesion in the left lung field in keeping with an intrapleural lipoma and multiple pleural plaques.

Given that intrathoracic and intrapleural lipomas can increase in size, following lung multidisciplinary team discussion, radiological surveillance in the respiratory clinic was undertaken for a 2-year period to ensure surgical resection would not be required.

Discussion

Lipomas are benign tumours that develop from adipose tissues and can be distributed almost anywhere in the body. They are the most frequently observed adult benign tumours. Intrathoracically, they are located at the mediastinum, bronchial and pulmonary levels. Intrapleural localisation is extremely rare.¹ In a review of 3502 cases of thoracic tumours, Jenson et al.² reported only three cases of intrapleural lipomas. Apart from lipomas, other differentials for a pleural-based mass include mesothelioma, metastatic pleural disease, pleural lymphoma, empyema and rounded atelectasis. Intrapleural lipomas (like rounded atelectasis³) are also benign and an important diagnosis to make considering the other more serious differentials mentioned. Intrapleural and intrathoracic lipomas can enlarge with time and lead to compressive symptoms such as cough, mild chest pain (as in our case), dyspnoea...
or a sensation of thoracic tightness. Accompanying signs such as bone erosion, cortical thickening and hyperostosis secondary to extrinsic pressure and peritoneal irritation are rarer but have been reported.\textsuperscript{4,5} In asymptomatic patients, they are usually detected as an incidental CXR finding as a smooth, rounded nodule or mass.\textsuperscript{6}

The management of pleural lipomas remains controversial. Conservative clinical and radiological follow-up is often used in small asymptomatic lesions or those unsuitable or higher risk for surgery (as in our case).\textsuperscript{1} If compressive symptoms occur due to progressive enlargement then surgical resection should be considered if the patient is fit to undergo this.

Conflict of interest: None declared.

References