Primary pulmonary plasmacytoma mimicking lung cancer diagnosed on endobronchial ultrasound (EBUS)-guided biopsy

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Accepted 2 June 2016

DESCRIPTION

A 77-year-old woman presented with progressive breathlessness on exertion. Chest radiograph showed a smooth right apical mass and CT of the chest confirmed a bilobed, well-defined right apical mass (figure 1). Positron emission tomography-CT showed a right apical soft tissue mass with marked fluorodeoxyglucose uptake (standardised uptake value max 8.6) with chest wall and likely mediastinal invasion (figure 2). The patient was referred for endobronchial ultrasound (EBUS) and a right paratracheal mass was noted; a 21 G needle was used to aspirate the lesion and the histology was

consistent with plasmacytoma (figure 3). Haematological staging investigations showed no evidence of systemic multiple myeloma. The patient was treated with radical radiotherapy.

Multiple myeloma is a systemic monoclonal plasma cell neoplasia primarily involving the bone marrow. A minority (<5%) of patients present with solitary bone plasmacytoma or, less commonly, with solitary extramedullary plasmacytoma. Thoracic involvement is very rare; it usually presents as a lung mass and, in some cases, with endobronchial infiltration.¹ Diagnosis on routine imaging can be challenging and a surgical biopsy may be required.^{2 3} To the best of our knowledge, this is the first case of primary pulmonary plasmacytoma diagnosed on EBUS-guided sampling.

Figure 1 Axial slice of arterial phase contrast-enhanced CT, demonstrating avid-enhancement of a bilobed soft tissue mass, arising within the superior mediastinum, adjacent to vertebrae.

Figure 2 Fluorodeoxyglucose (FDG) positron emission tomography/CT, coronal fused images, demonstrating avid FDG uptake (standardised uptake value max 8.6) within the previously seen right apical mass. Incidental note is made of photopenia within the liver, representing a benign cyst.

Figure 3 Histology image showing a medium sized atypical plasmacytoid population of cells with extracellular and perivascular amyloid deposition.

Learning points

- ▶ Primary pulmonary plasmacytoma should be considered in the differential diagnosis of lung masses.
- ▶ Endobronchial ultrasound-guided biopsy should be taken into account as first line investigation to gain biopsy sample.

Contributors UM wrote the initial manuscript. HJ reviewed and wrote the radiological descriptions. DGvP contributed towards the histopathology. MH performed the EBUS biopsy and reviewed the final manuscript. The case was managed and manuscript reviewed by all the authors.

Competing interests None declared.

Patient consent Obtained.

To cite: Maqsood U, Jones H, Gey van Pittius D, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2016-215785

Provenance and peer review Not commissioned; externally peer reviewed.

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