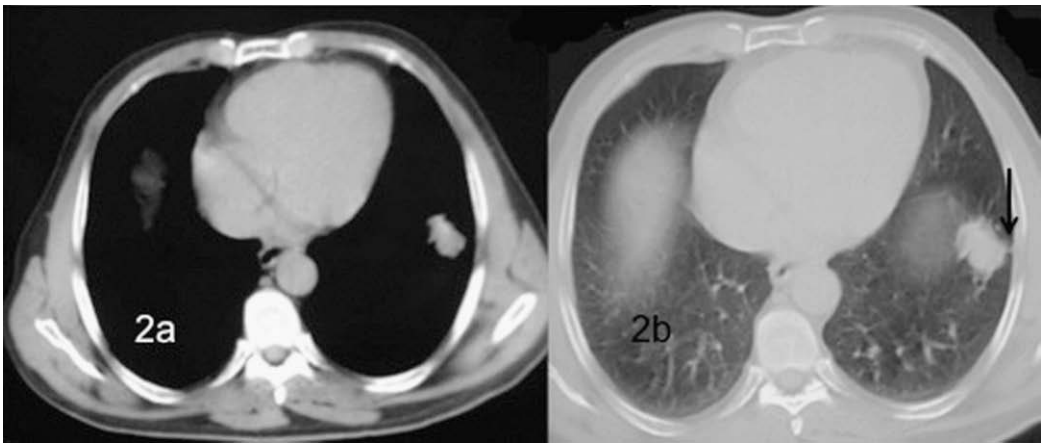

Figure 2. Computerised tomography without intravenous contrast, mediastinal window showing a solid and homogenous nodule *(a)*, parenchymal window showing the spiculated edges and pleural tail sign (black arrow) with *(b)*.

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Pulmonary inflammatory myofibroblastic tumour: a confusing diagnosis

Tumor miofibroblástico inflamatorio pulmonar: un diagnóstico confuso

To the Editor:

Although malignant carcinomas constitute the majority of lung malignancies, a wide variety of rare tumours occur sporadically in the lungs. Among these, inflammatory myofibroblastic tumours (IMT) have been described as single lesions usually well-defined, benign-appearing[1] which appear more frequently in the paediatric age.[2,4] By describing 2 cases of atypical radiological presentation, we discuss its wide range of radiological presentation and the occasional aggressive behaviour.

Figure 1a shows the initial study of a chest computerized tomography (CT) of a 51 year old male with recurrent pneumonia. There is a spiculated right hilar mass producing discreet extrinsic compression on the middle lobe bronchus and left lower lobe. There were low right paratracheal lymphadenopathies (not shown). The fine needle aspiration guided transthoracic CT showed only the presence of inflammatory cells. A pneumonectomy was conducted, with subsequent pathologic diagnosis of IMT. Nine months later a contralateral lung recurrence was detected, which was controlled with corticosteroids (Fig. 1b). In a long series of thoracic IMTs, Agrons et al[1] described that only 20% of them had spiculated margins. Bronchial affectation secondary to parenchymal lung injury occurs in 10% of cases, and lymphadenopathy in only 7%. In another series[4] of 23 patients, no cases were described with mediastinal lymphadenopathy. The differential diagnosis of a spiculated mass is extensive. In the adult, primary malignancy or metastasis must be first discarded. In a child, an injury of this kind more likely represents an IMT, especially if there are no other signs of malignancy.[1] From the radiological point of view, a spiculated lesion with arterial supply may be indistinguishable from an intralobular pulmonary sequestration.[1]

Figure 1c shows an axial CT scan of a 30 year old man with history of cough and expectoration of 5 months. In the bronchus of the right lower lobe a partially calcified endobronchial lesion is observed that produces a partial lobar atelectasis with bronchiectasis. The biopsy showed a non-specific inflammatory reaction. Following a right lower lobe lobectomy a diagnosis was obtained of an IMT (Fig. 1d). The thoracic endobronchial IMT are extremely rare[1] not the presence of intralesional calcium, which can occur in up to 15% of parenchymal lesions. IMT may simulate an endobronchial carcinoid tumour, adenoid cystic carcinoma or mucoepidermoid carcinoma. The presence of calcifications in lung injury points to a granuloma or hamartoma.[1]

Some authors think that the IMT is a non-neoplastic process resulting from the uncontrolled proliferation of inflammatory cells.[2,5] The cause

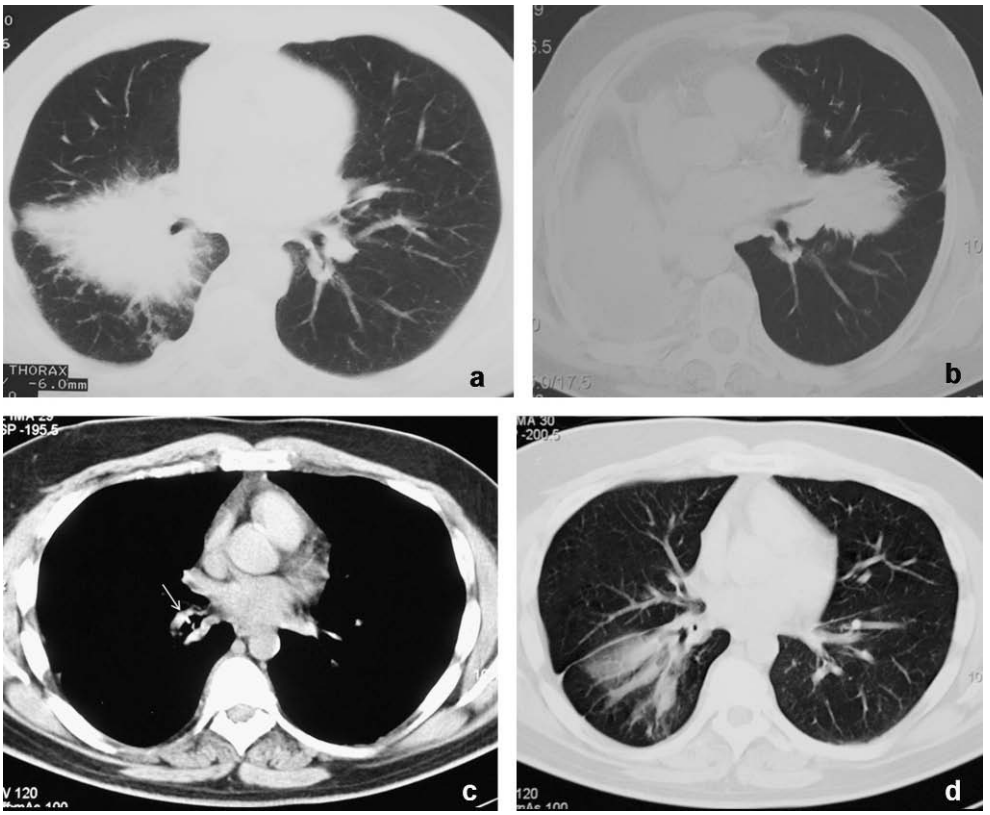

Figure 1. Case 1: CT scan of the chest *(a)* with contrast shows a large spiculated mass around the bronchus intermedius, 9 months later *(b)* a contralateral spiculated mass is found that comes into contact with the bronchus of the lingula. The patient was treated with prednisone. Case 2: chest computed tomography *(c)* shows an endobronchial lesion with punctate calcifications in the lower lobe bronchus (arrow), causing a partial postobstructive collapse of the right lower lobe *(d)*.

of such deregulation is unknown, but certain publications conclude that it is a secondary immune response to infection, trauma or previous surgery.[5] In fact, there is a recent history of pneumonia or lower respiratory tract infection in approximately 20-30% of patients,[1,4] an association we found in our 2 cases. IMT sometimes presents aggressive behaviour that makes it difficult to distinguish from a malignancy in an x-ray.[1,2] On this basis, other authors argue that the IMT is a low-grade fibrosarcoma with an associated mixed inflammatory response.[2,5] The last classification of lung tumours of the World Health Organization places this entity located within the lung tumours[5] and mesenchymal tumours called pulmonary myofibroblastic tumour. IMT is also known as inflammatory pseudotumour or plasma cell granuloma.[1,6]

Due to low frequency and its broad spectrum of radiological manifestations, the IMTs are difficult to diagnose. The fine needle aspiration and core biopsy findings are usually non-specific in diagnosing the disease and cannot rule out malignancy,[6] which usually leads to the excision of the lesion. Complete surgical resection is the treatment of choice not only to exclude malignancy but also for complete healing.[3,4] When achieved, the 5-year survival is over 90%.[4]

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