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Pulmonary puzzle

ANSWER

From the question on page 980

The patient underwent a thoracotomy with wedge resection of the right upper lobe of the lung and pathological examination of a specimen showed the presence of malignancy. Lobectomy of the right upper lobe was performed. Microscopic examination revealed sarcomatous tumour cells with dyscohesive pleomorphic nuclei and prominent infiltration (fig 1A). Upon immunochemical analysis the tumour cells were positive for cytokeratin and vimentin (fig 1B and C). The tumour was compatible with a giant cell carcinoma. Thyroid transcription factor-1 was measured to confirm the primary lung origin.

The patient developed intussusception due to intestinal metastasis 2 weeks later (fig 1D) and underwent segmental resection of the small intestine. Postoperative adjuvant chemotherapy was advised but the patient refused and he died 6 months later.

Giant cell carcinoma is classed as a pleomorphic carcinoma according to the World Health Organization classification.¹ It is a group of poorly differentiated non-small cell lung cancers (NSCLCs) that have sarcomatous or sarcoma-like elements. Examples of pleomorphic carcinoma are NSCLC; squamous cell carcinoma; adenocarcinoma; large-cell carcinoma containing spindle cells, giant cells, or both; or a carcinoma consisting only of spindle cells and giant cells. Most tumours with two cell components can be classified as pleomorphic carcinomas, but the pure spindle or giant cell tumour had also been reported. In

the present case, we called it “giant cell carcinoma” because the tumour contained only the giant cell.

The incidence of pulmonary pleomorphic carcinoma is low (1.6% of resected NSCLCs).² Pulmonary pleomorphic carcinoma presented in a symptomatic male smoker as a large peripheral lesion. Patients present with tumour-related symptoms such as chest pain, coughing and haemoptysis.³ These tumours are more aggressive and result in significantly poorer survival than other NSCLCs.⁴ The biphasic appearance of the tumour and its rarity often make diagnosis difficult.

Pure giant cell tumours of the lung are extremely uncommon. We have described an atypical image of a giant cell carcinoma of the lung. Positron emission tomography (PET) is useful for determining the distal metastases and assessment of mediastinal lymph nodes. As might be expected, intestinal metastasis may be detected if the PET is performed preoperatively. Surgical resection and aggressive postoperative chemotherapy should be considered in such cases.

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Figure 1 (A) Sarcomatous tumour cells showing dyscohesive pleomorphic nuclei and prominent nucleoli in diffuse infiltration with extensive necrosis (H&E stain, 400×). Tumour cells stained positively for (B) cytokeratin and (C) vimentin. (D) CT scan of the abdomen demonstrating nodule target lesion (arrow) over the right lower abdomen and intestinal dilatation, which was consistent with an intestinal intussusception.