Pulmonary dirofilariasis in a Caucasian patient with metastasised osteosarcoma in a non-endemic European region

A 22-year-old Caucasian man with a history of metastatic chondroblastic osteosarcoma was wedge resected via open thoracotomy after surveillance follow-up in 2009 revealed suspicious multifocal bipulmonary lesions on a CT scan (figure 1). Five years previously, neoadjuvant and adjuvant chemotherapy according to the COSS 96 protocol had been given. Surveillance follow-up in 2009 showed new multifocal partly calcified pulmonary lesions in both lower lobes. Histologically, the resected lesion in the lower right lobe was vital tumour metastasis whereas the lesion in the lower left lobe showed a non-malignant nodular granulomatous reaction to Dirofilaria repens (figure 2).

Dirofilaria is a common vector-borne zoonosis. Occasionally, nematodes are transmitted by mosquitoes to subcutaneous tissues of humans. In extremely rare cases such as extended periods of immunosuppression, worms migrate to the lungs and cause asymptomatic granulomatous coin lesions. Microscopically, typical pulmonary nodules display a central thrombosed artery and the parasite in various stages of degeneration, often surrounded by eosinophilia. To our knowledge, this is the first report of possible indigenous pulmonary dirofilariasis accompanying and mimicking lung metastasis in a patient with osteosarcoma.

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Acknowledgements The authors thank Dr Sven Poppert, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany for confirming the diagnosis of Dirofilaria repens by molecular biological methods.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

Accepted 23 October 2010
Published Online First 15 November 2010

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Thorax 2011 66: 270 originally published online November 15, 2010
doi: 10.1136/thx.2010.142323