Clinical vignette

Granulomatous periostitis and tracheal involvement in sarcoidosis

A 66-year-old Japanese woman, a domestic worker, presented with a 1 month history of continuous fever, upper leg pain, voice change and cough. There had been no response to antibiotics. The biochemical profile showed elevated levels of CRP (6.1 mg/dl) and IgG (2108 mg/dl), but calcium and ALP levels were normal. Tests for ANA, ANCA and angiotensin-converting enzyme were negative or normal. Blood cultures, the tuberculin reaction and HIV antibody were negative. Notably, fluorodeoxyglucose (FDG) PET/CT revealed a swollen trachea (Fig. 1A and B) and periostium of sclerotic femoral bone (Fig. 1C and D) with high uptake, but no evidence of lung involvement. Bronchoscopy showed mucosal oedema, erythema and nodules in the trachea, suggesting granulomatous lesions. CT-guided needle biopsy of the left sclerotic femur demonstrated non-caseating granulomas with Langhans-type giant cells. The patient was diagnosed with sarcoidosis and treated with prednisolone 40 mg and AZA 50 mg daily. After treatment, her symptoms and CRP level improved and the high FDG in the tracheal and periosteal lesions completely resolved. She was discharged without further complications. Periosteal or upper airway involvement in sarcoidosis is quite rare [1, 2]. This case should remind readers to consider sarcoidosis as a rare cause of fever of unknown origin or of periosteal and tracheal lesions found on imaging.

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Yoshiko Shimamura1, Yoshinori Taniguchi1, Rika Yoshimatsu2, Shigeo Kawase3, Takuji Yamagami2 and Yoshio Terada1
1Department of Endocrinology, Metabolism and Nephrology, 2Department of Radiology and 3Department of Hematology and Respiratory Medicine, Kochi Medical School, Nankoku, Kochi, Japan

Correspondence to: Yoshinori Taniguchi, Department of Endocrinology, Metabolism and Nephrology, Kochi Medical School, Kochi University, Kohasu, Oko-cho, Nankoku, Kochi 783-8505, Japan. E-mail: taniguchiy@kochi-u.ac.jp

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