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Images in Rheumatology

Eosinophilic Granulomatosis With Polyangiitis With a Pathologically Proven Calcified Lung Nodule

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Calcified intrapulmonary nodule is a rare finding of eosinophilic granulomatosis with polyangiitis (EGPA).[1]

A 39-year-old Asian man with a 2-year history of allergic asthma developed fever and right-sided chest pain upon inhalation. There was a painful erythema, decreased sensation, and weakness in the right first toe. Blood tests showed the following: eosinophil count, 2770/μL; C-reactive protein, 24.1 mg/dL, IgE, 2187 mg/dL; and negative antineutrophil cytoplasm antibody, troponin, and tuberculosis (TB) blood test. Urinalysis, electrocardiography, and echocardiography were normal. Chest computed tomography (CT) showed right-sided pleural effusion, calcification of the intrapulmonary nodules (Figure 1), and mediastinal lymphadenopathy with internal calcification. The nodule was resected under pleuroscopy, and pathological examination showed marked eosinophilic infiltration of the lung interstitium and eosinophilic vasculitis in the small-to-medium-sized vessels, suggestive of EGPA. However, large necrotic foci, epithelioid cells, and Langhans giant cells—suggestive of TB—were consistent with pulmonary nodules (Figure 2). Calcified lesions were observed inside the necrotic foci. Ziehl-Neelsen staining

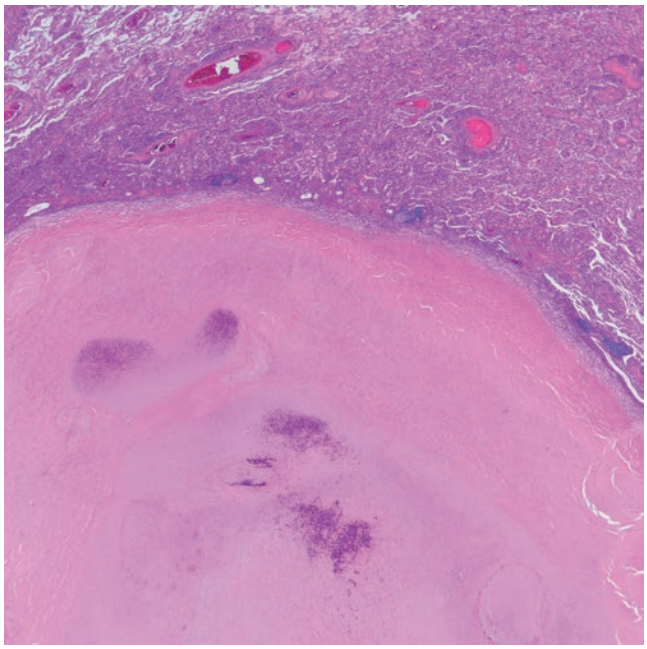

Figure 2. Histopathological findings of the lung nodule. Massive necrosis with granulomas (10×).

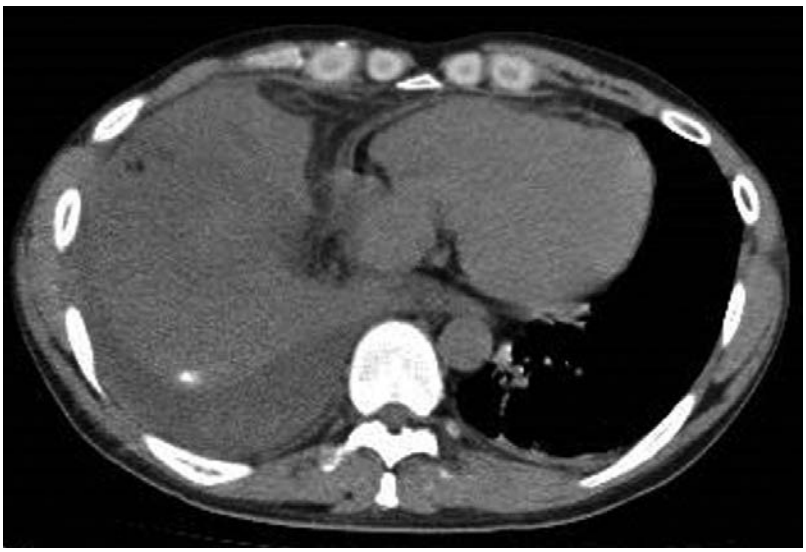

Figure 1. Chest computed tomography of calcified lung nodule and right massive pleural effusion.

was negative and, together with the negative TB test result, TB was ruled out. The patient was diagnosed with EGPA and started on steroids and intravenous cyclophosphamide, which rapidly decreased the eosinophil count. Chest CT 3 months after treatment showed no pleural effusion, improved mediastinal lymphadenopathy, and mildly increased internal calcification, which was considered as an old inflammatory change due to EGPA.

Although the uterus and pericardium can reportedly be calcified by EGPA,[2,3] eosinophilic necrotizing granulomatous vasculitis has not been pathologically proven. To our knowledge, this is the first case to demonstrate pathologically that calcification can occur in EGPA.

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Corrections

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The correct name of the second author is Yajima Nobuyuki. This correction applies only to the First Release published on October 1, 2022. The correct text appears in the print and online issues.

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