IgG4-related Disease Induced by Localized Pseudotumor

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Key words: localized pseudotumor, IgG4-related disease

(DOI: 10.2169/internalmedicine.51.6733)

A 71-year-old woman presented with a right upper lobe (RUL) mass (Picture 1), but no subjective symptoms. Chest computed tomography (CT) showed atelectasis in the RUL (Picture 2). Transbronchial lung biopsy and CT-guided transthoracic needle biopsy did not detect pathogenic microorganisms or malignant tumor. ¹⁸F-fluorodeoxyglucose positron emission tomography demonstrated an increased uptake (maximum standardized uptake value=7.66) in the RUL.
Video-assisted thoracoscopic lobectomy was performed on suspicion of malignant tumor. Histopathological examination showed infiltration of lymphocytes and plasmaocytes with fibrosis (Picture 4a: hematoxylin-eosin), and many infiltrating plasmacytes were IgG4-positive (Picture 4b: IgG4). Serum examination revealed: postoperative serum IgG, 2,070 mg/dL; postoperative IgG4, 170 mg/dL. IgG4-related disease was thus diagnosed. Postoperatively, the patient remained relapse-free despite no medication, with serum IgG levels normalizing within 3.5 months. This represents the first report of IgG levels normalizing postoperatively, suggesting that local disease may cause high IgG4 levels.

The authors state that they have no Conflict of Interest (COI).