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Clinical Image

Eosinophilic Granulomatosis with Polyangiitis Diagnosed by Gallbladder Tissue

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In eosinophilic granulomatosis with polyangiitis (EGPA), the incidence of gastrointestinal involvement is reported to range from 17% to 59% [1]. Gallbladder involvement is a rare comorbid condition in EGPA [2]. We present an atypical case of EGPA diagnosed on the basis of histological findings of the gallbladder after cholecystectomy. The study was approved by the Institutional Review Board of the Jeju National University Hospital (IRB no. 2018-07-009).

A 47-year-old man visited the hospital with progressive weakness and sensory deterioration in both the lower legs for 9 days. He had been diagnosed with asthma 6 months ago and had a history of surgery for sinusitis 5 months ago. Physical examination showed decreased muscle strength and right sided foot drop. On blood testing, leukocytosis with a marked increase in eosinophils was observed (white blood cell count 21,300/㎕; segmented neutrophils 33.7%, lymphocytes 7.5%, monocytes 2.1%, eosinophils 56.5%). Further laboratory examination revealed an increase in C-reactive protein to 4.68 mg/dL, erythrocyte sedimentation rate of 45 mm/hr, immunoglobulin E level of 2,500.0 IU/mL). Also, rheumatoid factor (27 IU/mL) and myeloperoxidase antibody (150.5 IU/mL) were positive.

Muscle weakness progressed gradually, with left sided foot drop developing on the night of admission, followed by right wrist drop, which presented the following day. On the third day, a nerve conduction study was performed, which showed multiple mononeuropathy. A 3 cm long sural nerve was biopsied from the lateral aspect of the left ankle, and high dose corticosteroid treatment (1 mg/kg prednisolone) was initiated immediately. Abdominal and pelvic computed tomography (APCT) and chest CT were performed to rule out the possibility of peripheral neuropathy associated with malignancy. Diffuse irregular gallbladder wall thickening was seen on APCT (Figure 1). However, positron emission tomography-computed tomography revealed no findings suspicious for gallbladder cancer. Cholecystectomy was performed as recommended by the surgeon, in order to rule out malignancy. Nerve biopsy results showed no inflammatory cell infiltration or vasculitis. However, eosinophilic granulomatosis with polyangiitis was diagnosed from the gallbladder tissue due to presence of chronic ac-

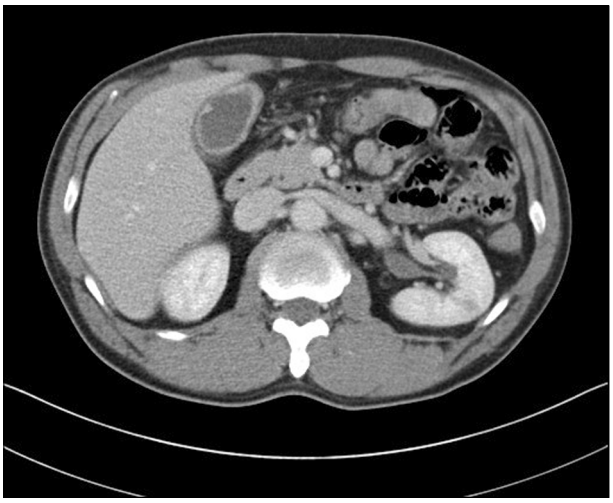

Figure 1. Abdominal and pelvic computed tomography scan showing diffuse wall thickening of the gallbladder with some irregularity.

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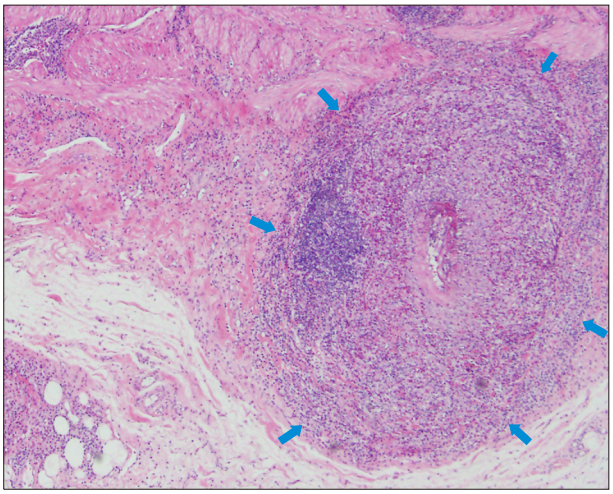

Figure 2. Granuloma surrounds the blood vessel (blue arrows) and granulomatous inflammation is also noted in and around the blood vessels (H&E, ×40).

tive inflammation with granulomatous vasculitis and eosinophilic infiltration (Figures 2 and 3). The patient was started on cyclophosphamide and high dose corticosteroid treatment, after which muscle strength gradually improved.

Histopathologic analysis still remains the gold standard for diagnosis of antineutrophil cytoplasmic antibody-associated vasculitis. Most cases are diagnosed by performing a biopsy at the symptomatic site, but characteristic EGPA findings may be seen in a biopsy performed at the symptom-free site, as observed in this patient.

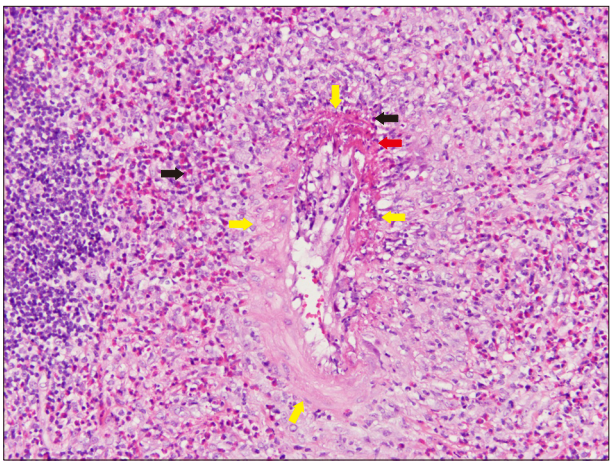

Figure 3. The vessel wall (yellow arrows) is destructed by inflammatory infiltrates in the right upper area of the vessel (vasculitis with fibrinoid necrosis, red arrow). Many eosinophils which have bright red colored cytoplasm infiltrates into and around the vessel (black arrows) (H&E, ×200).

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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