Rheumatoid Vasculitis as a Complication of Rheumatoid Arthritis

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Introduction

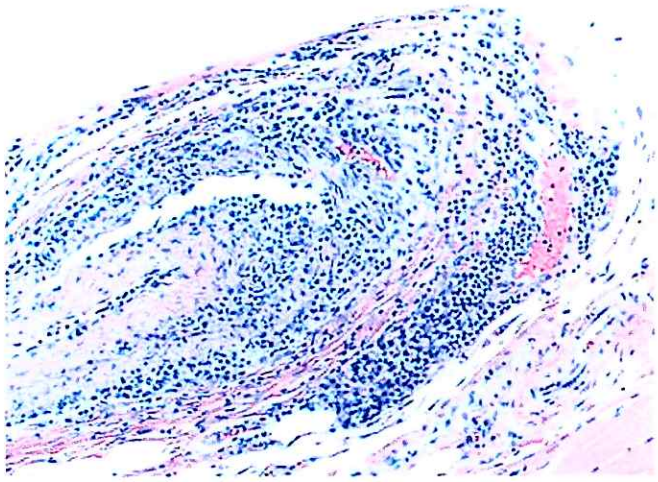
Rheumatoid vasculitis (RV) is an uncommon complication of rheumatoid arthritis (RA), with an incidence <1% annually. It is usually associated with high rheumatoid factor (RF) and anti-cyclic citrullinated peptide (anti-CCP) titers, joint erosions, and rheumatoid nodules. We present a case of RV in a patient with well controlled RA on disease-modifying antirheumatic drugs.

Case

Middle aged woman with seropositive (RF/anti-CCP), non-erosive RA on Methotrexate, Etanercept, and chronic prednisone therapy, originally presented two years ago with bilateral foot drop and numbness. Lumbar puncture showed normal protein. EMG showed acute motor and sensory axonal neuropathy. No nerve biopsy was performed. Symptoms were believed to be secondary to acute inflammatory demyelinating polyneuropathy and the patient was treated with IVIG, prednisone 40 mg taper and gabapentin. She presented recently with worsening symptoms to now include upper extremities (left>right). Repeat EMG showed severe axonal sensorimotor peripheral polyneuropathy with ongoing denervation in the tibialis anterior muscle. Neuropathy was symmetric in lower extremities but asymmetric in upper extremities. Labs included sedimentation rate 93 mm/hr, c-reactive protein 23 mg/L. Left radial nerve biopsy showed axonal neuropathy with loss of myelinated axons and vasculitis involving the epineurial blood vessels. Brachial muscle biopsy showed perimysial vasculitis, perivascular inflammation, type 2 myofiber atrophy with focal type 2 group atrophy consistent with steroid induced myopathy. IV Methylprednisolone 1g daily for 3 days followed by prednisone 60 mg daily and Rituximab infusion were administered.

Discussion

Since RV is uncommon and its presentation can mimic other conditions, diagnosing it can be challenging. The patient had mononeuritis multiplex with demyelinating axonal changes due to RV. We present this case to heighten physicians' awareness of this diagnosis when encountering RA patients with neuropathy and weakness and to stress the importance of nerve biopsy to achieve an accurate diagnosis.



H&E stained vessel with dense inflammatory infiltrate and vessel wall destruction consistent with vasculitis