Interferon Induced Digital Artery Vasculitis

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A 34-year-old white woman presented with a one-day history of a painful and purple right thumb. She had been diagnosed with hepatitis C 10 months previously, and had been taking ribavirin 1000 mg daily and interferon-α 120 µg weekly since the diagnosis, and had a recent HCV RNA < 50 IU/ml; she also had Hashimoto's thyroiditis, diagnosed 4 months previously, and was taking levothyroxine 112 µg daily. Examination confirmed a cyanotic edematous right thumb with normal radial and ulnar pulses bilaterally. Serologic studies for antinuclear antibodies, anti-double-stranded DNA, c-antineutrophilic cytoplasmic antibodies (ANCA), and rheumatoid factor were negative; however, p-

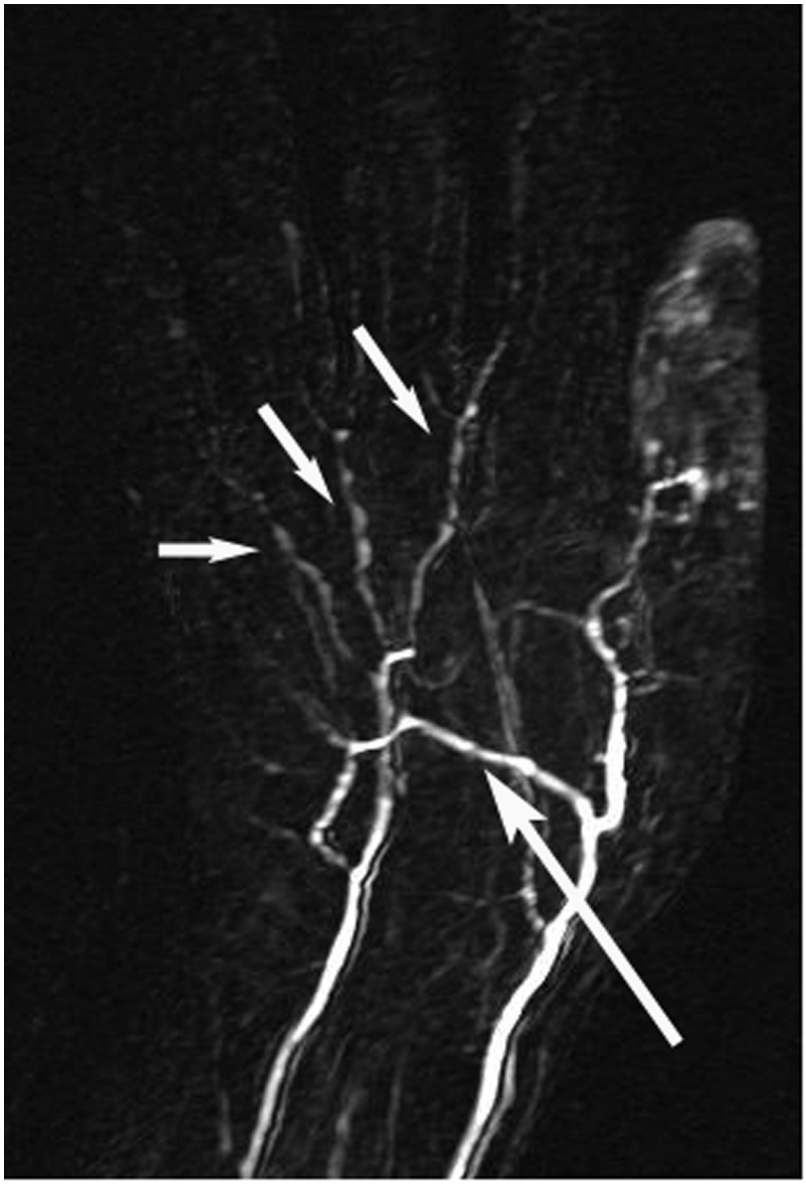

Figure 1. Contrast enhanced magnetic resonance angiography of the right hand.

ANCA was positive. In addition, complete blood count, erythrocyte sedimentation rate, and cryoglobulin levels were normal; complement levels were mildly low (C3: 78.3 mg/dl, normal 79–152; C4: 13.0 mg/dl, normal 16–38). Contrast enhanced magnetic resonance angiography of the right hand showed intact deep palmar arch (Figure 1, long arrow), poor distal filling of the digital arteries, a "beaded" appearance of the metacarpal branches (Figure 1, short arrows), failure to identify intact flow in the radialis indicis, and a markedly irregular contour of the princeps pollicis branch to the thumb. Contrast enhancement at the tuft of the thumb reflects the secondary soft tissue inflammation (Figure 1). Her antiviral treatment was stopped and her condition improved after intravenous pulse (1000 mg × 3 days) followed by oral (30 mg twice a day) corticosteroids.

Interferon treatment can be associated with severe vascular complications including Raynaud's phenomenon, digital gangrene, and vasculitis[1,2]. Immunosuppressive treatment and discontinuation of interferon usually result in resolution of these complications. Thus, in our patient, the most likely diagnosis was interferon induced vasculitis, as hepatitis induced vasculitis is unusual with low viral load and in the absence of cryoglobulinemia.

REFERENCES

1. Al-Zahrani H, Gupta V, Minden MD, Messner HA, Lipton JH. Vascular events associated with alpha interferon therapy. Leuk Lymphoma 2003;44:471-5.
2. Boonyapisit K, Katirji B. Severe exacerbation of hepatitis C-associated vasculitic neuropathy following treatment with interferon alpha: a case report and literature review. Muscle Nerve 2002;25:909-13.