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Images in Rheumatology

Claw hand deformity in longstanding vasculitic neuropathy

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An 80-year-old woman with a history of digital gangrene was admitted for gait disturbance. Physical examination showed livedo reticularis on the extremities and bilateral claw hand deformity with hyperextended metacarpophalangeal joints and flexed interphalangeal joints (Figure 1). Neurologic examination showed weakness in finger flexion and abduction and in thumb adduction bilaterally. Decreased sensation was remarkable in the bilateral ulnar nerve distribution, but it was mild in the bilateral median nerve distribution. Sural nerve biopsy revealed small- and medium-sized arteritis, suggesting polyarteritis nodosa.

In claw hand deformity due to pure ulnar neuropathy, weakness of the finger flexors, including the lumbrical muscles, causes hyperextension of the 4th and 5th, but not the 2nd and 3rd, metacarpophalangeal joints, as the 1st and 2nd lumbrical muscles are innervated by the median nerve. In Figure 1, hyperextension of the left 2nd and 3rd metacarpophalangeal joints suggests that median nerve damage was more severe on the left than on the right.

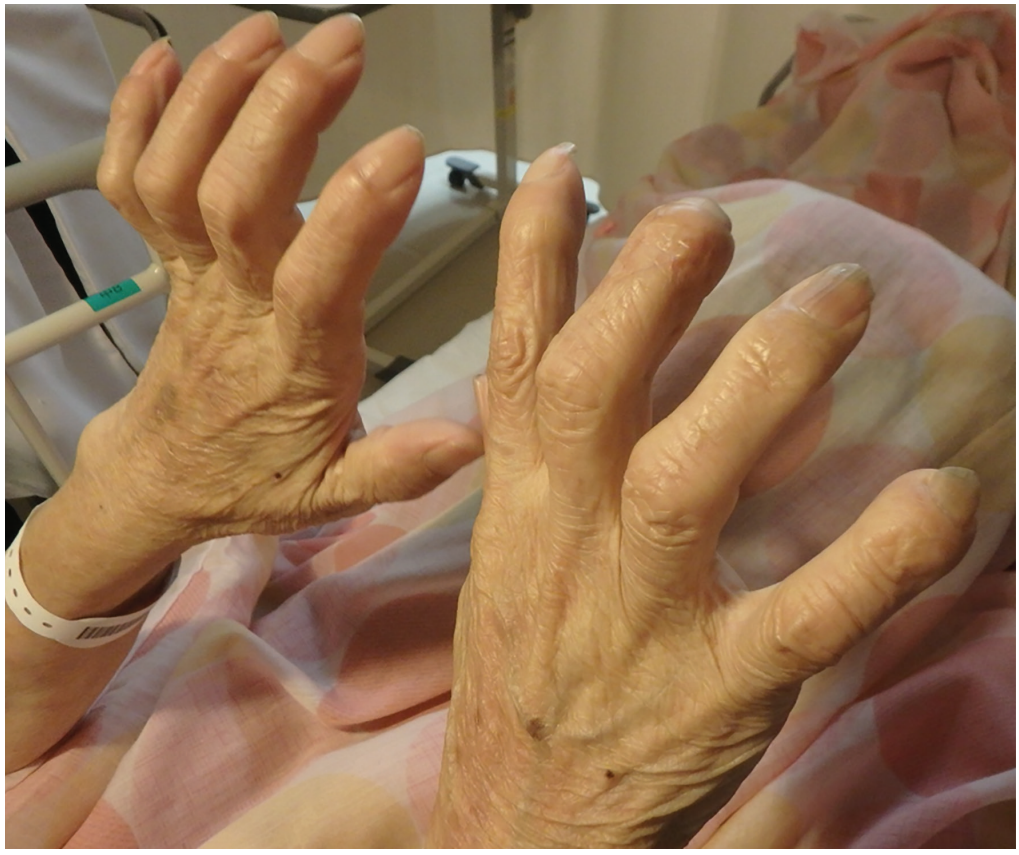

Figure 1. Bilateral claw hand deformity with hyperextended metacarpophalangeal joints and flexed interphalangeal joints.

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