Clinical Images

Acute Shoulder Pain Followed by Shoulder Weakness and Atrophy: A Characteristic Presentation of Parsonage-Turner Syndrome

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A 79-year-old man presented to clinic 2 months after acute onset of right shoulder pain and weakness. His symptoms began with 1 week of burning pain, followed by inability to lift his right arm above his head. He denied antecedent trauma. Physical examination revealed marked atrophy (Fig. 1) and absence of strength in the shoulder muscles. Sensation, as well as forearm and hand strength, remained intact. Magnetic resonance imaging (MRI) of the shoulder showed atrophy of the infraspinatus, teres minor, posterior

deltoid, and subscapularis muscles. Electromyography (EMG) showed severe right upper brachial plexopathy with acute axonal involvement and abundant acute denervation potentials, consistent with the Parsonage-Turner syndrome.

Parsonage-Turner syndrome, or “neuralgic amyotrophy,” is a rare idiopathic disorder characterized by acute onset of upper extremity pain, with subsequent development of muscle weakness and atrophy.^{1,2} The exact pathophysiology is unknown, but is hypothesized to include immunologic, biomechanical, and genetic factors.³ Nerves of the brachial plexus are most commonly affected. Parsonage-Turner syndrome is a clinical diagnosis, as EMG has low sensitivity.³ Recovery can take months to years, and is often incomplete. There is no evidence-based treatment, and management is supportive.² Eighteen months after symptom onset, the patient has not recovered strength in his shoulder.

Figure 1 Significant atrophy of the right shoulder 2 months after onset of pain.

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Compliance with Ethical Standards:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

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