An Unusual Cause of a Neck Mass

Mahnaz Momeni, MD, Kathleen Brindle, MD,† and Paul J. DeMarco, MD‡*

The patient, a 34-year-old woman, presented with a 4-week history of a painful, unilateral neck mass and torticollis. On examination, she had swelling and tenderness over the right sternocleidomastoid muscle along with restricted neck movement. Her serum creatine kinase level was 186 IU/L (normal 0–165), serum aldolase was 8.9 U/L (normal 1–8), ESR normal.

Serology for *Trichinella* and toxoplasmosis were negative. Biopsy of the sternocleidomastoid muscle demonstrated marked interstitial fibrosis, focal lymphocyte infiltration, no evidence of regeneration, degeneration or vasculitis and a normal amount of glycogen.

MRI of the neck revealed significant inflammation in the right sternocleidomastoid muscle (Figs. 1 and 2). She was treated with prednisone and methotrexate for about 10 months with significant improvement of her symptoms. Repeated MRI revealed no enhancement in the right sternocleidomastoid muscle (Fig. 3). She never developed any sign of polymyositis with eighteen months follow-up.

Focal myositis is characterized by the selective involvement of a single muscle by the inflammatory process.[1] The diagnosis of focal myositis is determined by biopsy of the muscle. The clinical course is variable, with a high rate of spontaneous regression. However, focal recurrence in other muscles or progression to polymyositis has been reported.[2] Muscle enzymes and erythrocyte sedimentation are usually within the normal range. Heffner and Barron reported 6 patients, each of whom initially had a single, localized, painful mass. They concluded that an essential clue to the diagnosis of polymyositis at the early localized stage is the elevation of ESR and serum creatine kinase that does not occur in focal myositis.[3]

From the *Rheumatology Division, George Washington University Hospital, Washington, DC; †Radiology Division, George Washington University Hospital, Washington, DC; and ‡Rheumatology Division, Washington Hospital Center, Washington, DC.

Reprints: Mahnaz Momeni, MD, Rheumatology Division, George Washington University Hospital, Washington, DC. E-mail: mmomeni@mfa.gwu.edu.

ISSN: 1076-1608/07/1301-0041

DOI: 10.1097/01.rhu.0000255771.84106.90

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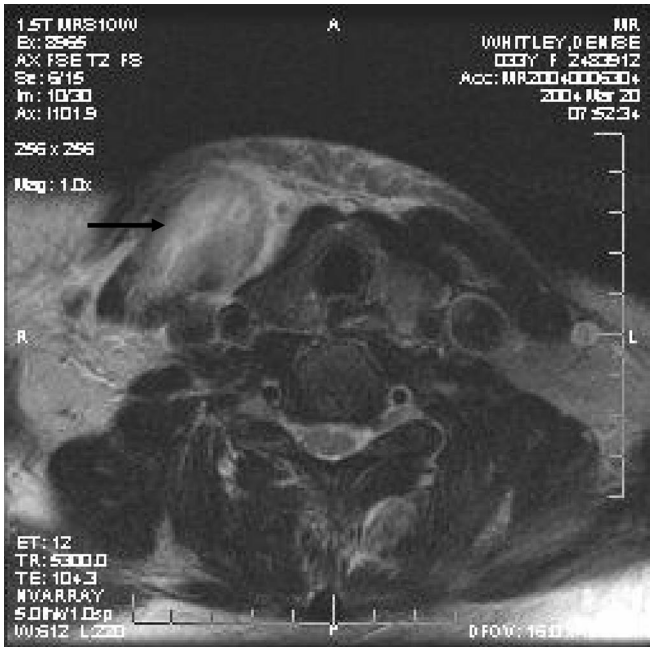

FIGURE 1. Axial T2-weighted FSE image with fat saturation through the lower neck demonstrates enlargement of the right sternocleidomastoid muscle (black arrow). There is increased T2 signal within a majority of the visualized portion of the muscle.

FIGURE 2. Coronal T1-weighted image of the neck with fat saturation obtained after gadolinium administration reveals enhancement of the enlarged right sternocleidomastoid muscle (white arrow).

FIGURE 3. Coronal T2-weighted FSE image with fat saturation through the same area was obtained 10 months later following treatment. The right sternocleidomastoid muscle (white arrow) is no longer enlarged and normal low T2 signal is seen within the muscle.