Teaching *NeuroImages*: Neurogenic thoracic outlet syndrome

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Figure Right brachial plexus magnetic resonance neurography

Coronal and axial T1-weighted images (A, B) and coronal fat-suppressed T2-weighted neurographic image (C) reveal a thick fibrous band (arrows in A and B) causing distortion and edema of the right brachial plexus (arrowheads in A and C). Oblique coronal fat-suppressed T2-weighted neurographic image (D) further illustrates a selective thickening of C8 root (arrowheads).

A 64-year-old man presented with a 5-month history of right neck and arm pain followed by progressive hand weakness. Cervical X-rays and MRI were normal. EMG disclosed lower trunk brachial plexopathy. Magnetic resonance (MR) neurography revealed right brachial plexus distortion with thickening of the C8 root caused by a fibrous band (figure, A–D). The patient refused surgery.

Thoracic outlet syndrome (TOS) refers to symptoms caused by neurovascular bundle compression at the transition between the neck and axilla.¹ Many factors can predispose to neurogenic TOS, including cervical ribs, anomalous first ribs, and congenital

narrow scalene triangles.¹ If standard X-rays prove normal, MR neurography may be useful in identifying the nature and site of the lesion.²

AUTHOR CONTRIBUTIONS

Drafting/revising the manuscript for content, including medical writing for content; study concept or design; analysis or interpretation of data; acquisition of data; study supervision or coordination: Dr. Luigetti, Dr. Capone, Prof. Di Lazzaro.

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