Teaching Video NeurolImages: Hourglass-like fascicular constriction in Parsonage-Turner syndrome

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Figure 1 Ultrasound, intraoperative photograph, and histopathology

(A) Longitudinal ultrasound section of an anterior interosseous nerve fascicle in the median nerve at elbow level, hourglass-like, torsional constriction (distal constriction; proximal constriction not shown). (B) Intraoperative confirmation of 2 constrictions (thick arrows) with slight torsion at internal neurolysis; fascicular grafting followed. (C) Histology of resected fascicle with subtotal loss of vital nerve tissue within the constriction; note the torsional appearance.

A 43-year-old woman presented with intense pain in the left upper arm, a plegic flexor pollicis longus, and flexor digitorum profundus of the 2nd digit without sensory symptoms

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Preoperative dynamic ultrasound of the median nerve (filled arrows) in cross-sectional view with inhomogeneous fascicular diameters, from distal to proximal. Thin arrows: prominent fascicle with constrictions and swellings at the level of (A) the distal constriction, (B) between constrictions, (C) the proximal constriction, and (D) the adjacent, proximal, "ballooned" swelling.

occurring 8 days after a hysterectomy. Needle myography showed acute denervation and absent volitional motor activity of affected muscles. The patient was diagnosed with Parsonage-Turner syndrome (PTS) (figures 1 and 2, video 1).

PTS or neuralgic amyotrophy presents with subacute intense extremity pain, followed by patchy axonal lesions of upper extremity or plexus nerves. The combination of long thoracic and anterior interosseous nerve affections is almost pathognomonic. Recently, hourglass-like fascicular constrictions and torsions have been observed in the clinical context of neuralgic amyotrophy.^{1,2}

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Disclosure

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