

Chronic Bilateral Brachial Plexus Entrapment Secondary to Cervical Rib: Case Report

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ABSTRACT

34 y-old female without significant past medical history misdiagnosed as neck pain, cervical rib accidentally discovered on cervical X-ray and revised clinical and electro-physiological exam proved brachial plexus compression.

Keywords: Cervical rib; Brachial plexopathy

INTRODUCTION

Cervical rib has been infrequently reported to result in neurogenic thoracic outlet syndrome. The following case presenting a partial bilateral brachial plexus compression that could be related to the accidentally discovered rudimentary cervical rib.

CASE DESCRIPTION

34-y-old Right handed female with past medical history of nasal allergy, presented with right sided neck pain radiating to Right shoulder for 1 y, associated with constant right-hand numbness, with some nocturnal exacerbation, and frequent object falling. No trauma history. No gait, bowel or bladder disturbance. Pain was 8-9/10, not relieved by gabapentin 600 mg daily prescribed by primary care physician. Clinical exam revealed: Neck: Limited ROM except for left side bending, negative Spurling test bilaterally, positive trigger points (bilateral Trapezius, Right supra-spinatous and Rhomboid). Neurological exam: Alert oriented x 3. Speech and articulation: intact., Deep tendon jerks: Biceps G1 bilaterally, other jerks G2 bilaterally. Sensations: hypoesthesia affecting whole Right hand. Manual Muscle testing: R thenar 3/5, left thenar 4/5, R hypothenar 4/5, R hand small muscles 4/5. other extremity muscles 5/5. Normal Gait.

NCS revealed abnormal right and left lateral and medial antebrachial, left sensory radial nerves, right ulnar sensory amplitude. EMG revealed no abnormal rest potentials and polyphasic long duration MUPS at: R&L APB, L biceps, L deltoid, R&L FDI, R ADM. X-ray&MRI C-spine: Intact disc spaces, rudimentary cervical rib that is complete at the right side and partial at the left.

DISCUSSION

This case presenting chronic brachial plexus entrapment with partial recovery mainly affecting right upper, lower trunk and left upper trunk. evidently the cause is the accidentally discovered rudimentary cervical rib with preferential degree of compression according to size of cervical rib.

Previous literature documenting few similar conditions with variable prognosis.

Henry et al. reported that cervical rib are frequent findings in patients with TOS [1]. Farina et al. suggested that thoracic outlet syndrome is rare neurovascular complication generally caused by the presence of a cervical rib or hypertrophic scalene anterior muscle that can compress the brachial plexus [2].

Millan et al. described 5 cases of true thoracic outlet syndrome that had been undergone surgery for cervical rib [3].

CONCLUSION

Cervical rib can lead to variable degree of brachial plexus entrapment, not limited to neurogenic thoracic outlet syndrome.

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Received: May 02, 2021; **Accepted:** May 17, 2021; **Published:** May 24, 2021

Citation: Hussein N, Chen Y, Thomas M, Prince D (2021) Chronic Bilateral Brachial Plexus Entrapment Secondary to Cervical Rib: Case Report. *Int J Phys Med Rehabil.* 9:612.

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