

Parsonage – Turner Syndrome – A Case Study

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Abstract

Background: Parsonage-Turner Syndrome is a rare condition, involving shoulder & scapular muscles. The role of physiotherapy is unexplored.

Objective: To throw light on the clinical picture & course of recovery in a case of Parsonage-Turner Syndrome.

Discussion: Case study here discusses about physiotherapy assessment & role of physiotherapy in Parsonage- Turner Syndrome.

Conclusion: Patient suffering with Parsonage- Turner Syndrome can be benefitted with a holistic approach of medicines & physiotherapy.

Keywords: *Brachial Neuritis, Parsonage Turner Syndrome, Brachial Plexopathy, Rare Shoulder Diseases*

Introduction

Parsonage Turner Syndrome (PTS) is a term used to describe a neuritis involving the brachial plexus, PTS is a rare syndrome that may occur in otherwise normal healthy individuals with symptoms of a sudden onset, constant, severe throbbing, non-positional shoulder girdle pain, self-limiting in nature. [1]

It is also referred to as Acute Brachial Neuritis,
Idiopathic Brachial Plexopathy,
Brachial Neuritis,
Brachial Plexus Neuritis,
Brachial Plexus Neuropathy,
Neuralgic Amyotrophy [1,2]

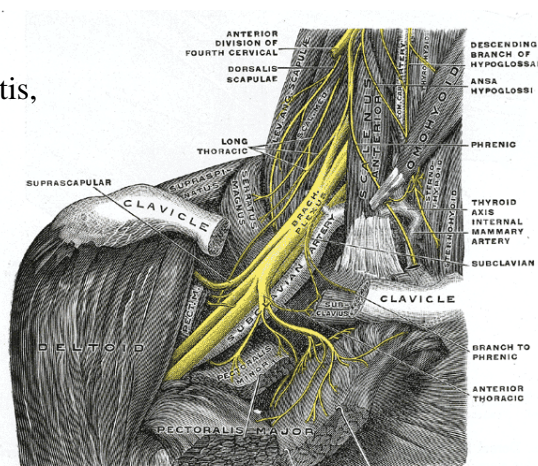


Fig. 1 Brachial Plexus

This acute phase may last for few hours to a few weeks and is followed by sensory deficits (not in all patients) wasting & atrophy of the muscles in the affected areas. Although the

etiology is unclear, it is reported in various clinical situations, including postoperatively, post infectious (25%), posttraumatic & post vaccination (15%). [4] There could be several causes of development of PTS, multiple theories exist including genetic or hereditary neuralgic amyotrophy, however experts do not know exact cause.[2]

PTS may present with symptoms of an isolated peripheral nerve lesion, although the pathology is thought to lie more proximally. It generally involves one upper limb; mostly the axillary nerve, the upper trunk of brachial plexus, the suprascapular nerve & the long thoracic nerve are affected. It is an uncommon neurological disorder characterized by rapid onset of severe pain in the shoulder and arm [4].

3 per 100,000 get PTS each year. More males than females are affected with more common in young adults, but young children & the elderly have reportedly had it, too. [2]

Case Report

Reported case here is of a 9 year old boy who presented at physiotherapy center with sudden onset severe left shoulder pain without any obvious cause. He consulted orthopedician who took X-Ray which was normal, they prescribed NSAIDS, though pain subsided but he was unable to raise shoulder at all. There was no eccentric control of shoulder. He was then referred to Neurologist, He was prescribed tapering dose of steroids. Patient showed no improvement after a week so then was advised for physiotherapy.

Physiotherapy assessment demonstrated neither pain or tenderness nor any sensory deficit. Patient was unable to raise shoulder for any movement actively while passive ROM was complete. After he was disrobed, he had substantial atrophy of scapular & deltoid muscles. Muscle power assessed by MODIFIED MEDICAL RESEARCH COUNCIL GRADING was reduced for Supraspinatus, Infraspinatus, Serratus Anterior, Anterior & Middle Deltoid. There was complete lack of eccentric control in shoulder.

FG test for scapular & upper limb muscles was negative for faradic currents & feeble contractions seen for interrupted galavanic.

He underwent MRI on next day for left shoulder. MRI showed subacute denervation of supraspinatus, infraspinatus and deltoid muscles without definite injury/edema of left brachial plexus. Minimal dilated central canal involving cervical spinal cord from C5 to C7 vertebral levels. Clinical pathological correlation is suggested to rule out Brachial Neuritis/Parsonage Turner Syndrome.

Physiotherapy treatment was planned

- Scapular isometric/stabilization exercises
- Isometric – active control exercise for scapula & shoulder at multiple angles
- Electrical stimulation with interrupted galavanic current & progressively Surged Faradic for Supraspinatus, Infraspinatus & Deltoid group.
- Scapular strengthening exercises
- Theraband training



Fig. 2 Shoulder & Scapular Muscles Wasting

Results and Discussion

This patient represents a rare case of Parsonage-Turner Syndrome, a condition that is categorised under RARE DISEASE DATABASE by NORD who is showing significant improvement with appropriate physiotherapy.

The report here is to highlight clinical thinking & rational combined for diagnosis as well as progression & results of physical therapy treatment for a 9 year old with PTS.

Conclusions

Present case study is showing gradual improvement with holistic approach of neural multivitamins & physiotherapy. Consistent religious physiotherapy with standardized protocol needs to be followed by therapist and patient. Thus appropriate well planned physical therapy would help to get faster and normal recovery in patients suffering with Parsonage-Turner Syndrome.

Relevance & Implications of the Study

Parsonage-Turner Syndrome being a rare condition with many times idiopathic or unknown cause might consult to physiotherapist directly without any radiological examinations, but thorough assessment with keen observation and examination skills would lead therapist to appropriate diagnosis and plan treatment accordingly. This case clearly emphasizes the importance of critical thinking that starts from the very first visit when an examination & evaluation happens which would have great impact on patient's recovery. This case study throws light on the evident inevitable role of physiotherapist in rehabilitation of a rare condition like Parsonage-Turner Syndrome.

Acknowledgements

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