Parsonage Turner Syndrome: An Occupational Therapy Case Report

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BACKGROUND AND PROBLEM

- Parsonage Turner Syndrome (PTS) is a rare disorder characterized by spontaneous paralysis of one or both upper extremities, followed by severe pain in the shoulders, upper extremity muscle weakness and atrophy.
- Patients with PTS may have severe upper extremity impairment, resulting in a loss of functional independence.
- Occupational therapy is vital for these patients because it can improve occupational performance and upper extremity function, maintain and increase range of motion and muscle strength in affected limbs, and aid in the rehabilitation process through a multitude of therapeutic approaches.
- Conservative treatment is critical to patients with PTS due to the spontaneous nature of recovery, however there is limited research or guidelines regarding the role of occupational therapy practitioners working with patients diagnosed with PTS
- There is limited information on the role of the occupational therapy practitioner or any intervention guidelines available.

PURPOSE

- The purpose of this retrospective case report is to portray the benefits of occupational therapy for one patient with PTS and to help define the role of the occupational therapy practitioner when working with patients with PTS.

PICO QUESTION

- Does occupational therapy (I) improve occupational performance and upper extremity function (O) in patients with Parsonage Turner Syndrome (P)?

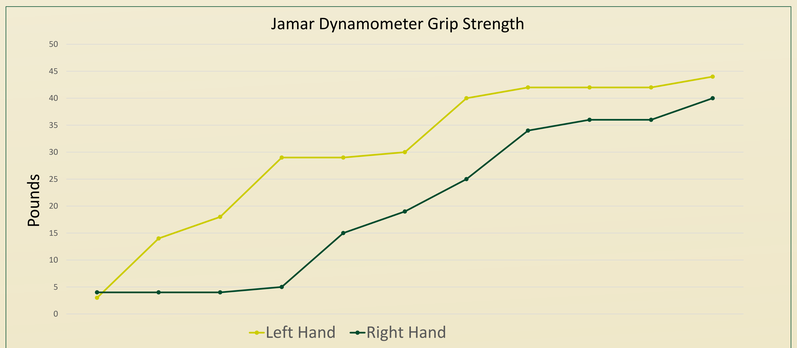
LITERATURE REVIEW

- PTS presents with moderate to severe shoulder pain lasting several weeks, resolving with delayed upper limb weakness, muscle atrophy, and paraesthesias.[4]
- Patients present with a spontaneous pattern of recovery between a few months to three years.[1]
- Patients often show 80 percent recovery of muscle strength between two to three years, but residual paresis and exercises intolerance may last in up to 70 percent of patients. [4]
- In a 6 subject case report, patients recovered along different timelines between 5 months and 31 months. [1]
- In a single study case report, 1 subject achieved complete recovery following 12 months of therapy. [4]
- Occupational therapy is the cornerstone of conservative treatment for PTS. [1,3,4,5]
- Occupational therapy plays an important role in the treatment of PTS through pain management, strengthening, range of motion, and functional performance.[2]

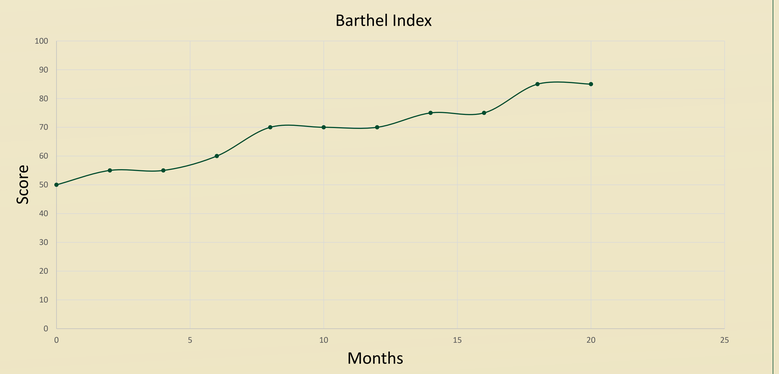
METHODS

- A retrospective case report was conducted of a 60-year-old male with PTS who attended occupational therapy between October 5th, 2020 to June 1st, 2022.
- Occupational therapy sessions were conducted in an outpatient hand therapy clinic by a licensed occupational therapist 2-3 times per week for 60 minute sessions for 20 months.
- Measurements were conducted every 2 months throughout the course of therapy.
- Outcome measures and tools
  - QuickDASH – measures upper extremity function and perception of disability
  - Barthel Index for ADLs – measures occupational performance
  - Goniometry – For range of motion
  - Manual muscle testing – For muscle strength
  - Jamar Dynamometer grip strength
- The MOHOST-SA was provided one time after 20 months of therapy to receive client feedback about their own occupational participation and to express the client's perception of occupational therapy services.
- Subject: Well educated, father, husband, neighbor, enjoyed spending time with family, working, and walking the dogs.
- Interventions: Range of motion, muscle strengthening, fine motor activities, ADL retraining, adaptive equipment education.
- Good compliance led to the ability to walk the dogs, drive, and work on the computer.

RESULTS



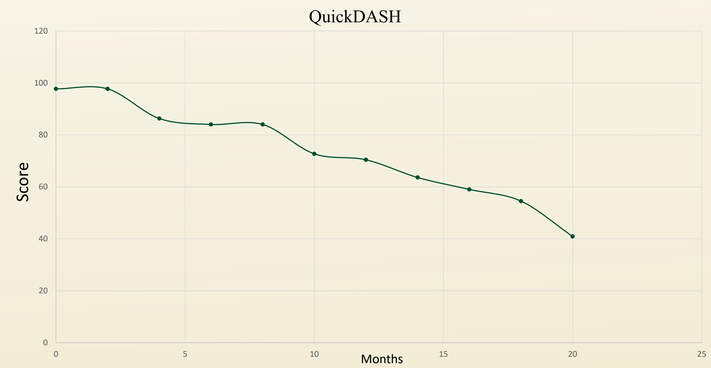
Note: Bilateral hand Jamar Dynamometer grip strength measurements. Right hand demonstrates a 36 pound increase and the left hand demonstrates a 41 pound increase over a 20 month period.



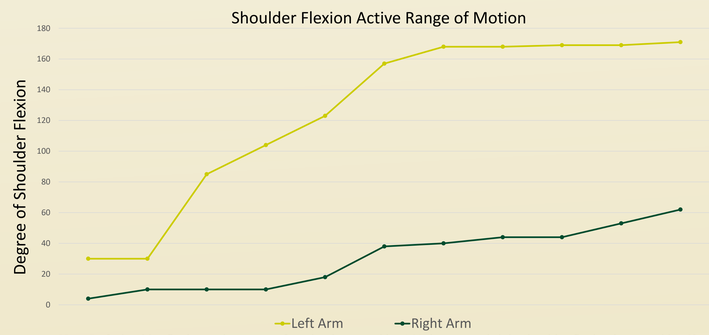
Note: Results represent a 35 point score improvement on the Barthel Index, indicating increased functional independence over the course of occupational therapy.

SCAN ME

RESULTS



Note: Results demonstrates a steady decrease in score, indicating a significant improvement in upper extremity function. 100=Severe disability, 0= No disability



Note: Left shoulder flexion active range of motion improved by 141 degrees and right shoulder flexion improved by 62 degrees.

IMPLICATION OF FINDINGS

The results of this retrospective case report indicate that occupational therapy is a beneficial conservative management treatment option for patients diagnosed with PTS. Occupational therapy is an effective treatment method for reducing and preventing contractures, improving range of motion and muscle strength, improving upper extremity function and increasing occupational performance and participation in activities of daily living in patients presenting with PTS. Further research is necessary to investigate the role of occupational therapy and PTS.

Limitations: The sample size of the case report is small consisting of one participant, which makes it difficult to generalize the results. The practitioner involved was aware of the study goal, which could have led to an ascertainment bias. Recovery for patients with PTS is spontaneous, making it difficult to demonstrate a cause and effect relationship.

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