



# The Effect Of Osteopathic Manipulative Treatment On A Post-Stroke Patient With Persistent Shoulder Pain



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## Case Diagnosis

Myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) and persistent bilateral shoulder pain following hemorrhagic stroke secondary to fibromuscular dysplasia.

## Case Description

A 51-year-old female with a history of ME/CFS, fibromuscular dysplasia, and spontaneous hemorrhagic strokes presented with bilateral shoulder pain. Her pain had remained persistent since her most recent hemorrhagic stroke six years prior. She also experienced numbness/tingling of the right hand. The musculoskeletal exam revealed limited range of motion (ROM) with abduction/extension of the glenohumeral (GH) joints bilaterally and a positive Hawkins-Kennedy test bilaterally.

## Imaging

### Bilateral Shoulder MRI (Initial Findings)

Bilateral acromial impingement of the supraspinatus/infraspinatus tendons

Edematous enlargement of the acromioclavicular joints

Fluid within the GH joints

## Interventions

Somatic Dysfunction	Osteopathic Manipulative Treatment
Atlanto - occipital Joint (OAERRSL)	Myofascial release (MFR), Muscle energy (ME)
Cervical vertebrae (C4FRRSR)	Balanced Ligamentous Tension (BLT), ME
Thoracic vertebrae (T3-T6NRLSR)	BLT, MFR
Lumbar vertebrae (L2-L4NRLSR)	BLT, ME, MFR
L. Levator Scapulae/Trapezius	ME
R. Clavicle horizontally extended	ME
L. 1 <sup>st</sup> rib inhaled	ME
<b>Bilateral GH joints restricted</b>	Articulatory (Spencer technique)

## Results

### Results Following 3rd OMT Treatment Session

Pain scale decrease from 6/10 to 2/10 bilaterally

Improved function/ROM of the GH joints bilaterally

Decreased frequency & duration of numbness/tingling in right UE

Decrease in severity of prior somatic dysfunctions

## Discussion/Conclusion

As one of the most common complaints following a cerebrovascular accident, shoulder pain may result in significant disability, impede the rehabilitation process, and has been associated with depression and decreased quality of life. With multiple underlying causes, post-stroke shoulder pain is challenging to manage. Few conservative, non-invasive, and non-pharmacologic treatment options have been proven effective for chronic pain management. There is literature to support the use of OMT in the management of chronic shoulder pain secondary to various etiologies. However, to our knowledge, none have evaluated the effectiveness of OMT in the setting of refractory, chronic, post-stroke shoulder pain.

This case demonstrates that the use of OMT may be useful in alleviating pain and increasing function/ROM through the treatment of somatic dysfunctions in the setting of chronic post-stroke shoulder pain. Replication of OMT treatments with various post-stroke populations should be explored as a conservative, alternative approach for handling post-stroke shoulder pain for patients refractory to other treatment methods.

