

## **Healing After Hemiparesis: The Effect of Osteopathic Manipulative Treatment on Post-Stroke Pain**

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### **Introduction/Background:**

The CDC estimates that every 40 seconds, someone in the US suffers a stroke, equaling over 795,000 stroke victims each year. It has also been estimated that around 30% of stroke survivors experience pain sometime after.

### **Case:**

A 39-year-old male patient presented to the osteopathic treatment center with chronic low back pain following a CVA. The patient exhibited left upper and lower extremity hemiparesis and contractures, which resulted from an internal carotid artery dissection and middle cerebral artery stroke in April, 2019. Due to cognitive deficits, the patient was unable to establish a pain scale. Physical exam revealed hyperreflexia, diminished muscle strength, and diminished sensation of the left extremities. OMT was directed towards the somatic dysfunctions of the left extremity contractures, the thoracic and lumbar spine, and the innominates. A variety of techniques were used but the most effective modalities were myofascial release, articular techniques, and BLT.

### **Results:**

After the third treatment, the patient stated his low back pain steadily decreased with each appointment. Remarkably, the patient, who spent most of his time in a wheelchair, is now walking with a quad cane regularly since receiving OMT. He has also begun walking small distances without the cane. The patient attributed his improvements with ambulating to OMT. The patient's primary caregiver had noticed a decrease in the patient's contractures and an increase in his ability to participate in physical therapy exercises comfortably.

### **Discussion:**

Our case study suggests the use of OMT can be effective in treating pain related to somatic dysfunctions caused by post-CVA contractures. Additionally, OMT may be beneficial in improving the quality of life in hemiplegic patients. A limitation is the lack of objective gait analysis measurements.

