

Chiropractic sacro occipital technique (SOT) and cranial treatment model for traumatic brain injury along with monitoring and supplementing for neurotransmitter balance: A case report

Esther Remata and Charles Blum

Abstract: The purpose of this paper is to present a novel treatment model incorporating laboratory testing to evaluate neurotransmitter balance and chiropractic cranial care for the treatment of a patient with traumatic brain injury. Treatment of brain trauma is a very individualized process and what may help one patient may not help another. It is not possible with case reports to determine if effective treatment for one patient can be generalized to the brain trauma population at large.

It is worthy of consideration when a patient does not respond or has an adverse reaction to medications and is non-responsive to traditional approaches that a chiropractor trained in SOT and cranial treatments might be considered for collaborative care.

Indexing Terms: Chiropractic, neural mediators, sacro-occipital technique.

Introduction

The purpose of this paper is to present a novel treatment model incorporating laboratory testing to evaluate neurotransmitter balance and chiropractic cranial care for the treatment of a patient with traumatic brain injury.

Recently some studies have investigated a relationship between traumatic brain injury and neurotransmitters. (1) *'Traumatic brain injury (TBI) releases harmful mediators that lead to secondary damage. On the other hand, neuroprotective mediators are also released, and the balance between these classes of mediators determines the final outcome after injury'*. (2)

Cohen et al found that 'mild to moderate cases of traumatic brain injury (TBI) are very common, but are not always associated with the overt pathophysiological changes seen following severe trauma. While neuronal death has been considered to be a major factor, the pervasive memory, cognitive and

... 'Traumatic brain injury (TBI) releases harmful mediators that lead to secondary damage.' This report shows how one chiropractor incorporated this new knowledge in her care of a patient with brain injury using SOT methods.



motor function deficits suffered by many mild TBI patients do not always correlate with cell loss'. (3) One aspect of their research focused on the hippocampus, and how *'TBI regionally alters the delicate balance between excitatory and inhibitory neurotransmission in surviving neurons, disrupting the normal functioning of synaptic circuits'*. (3)

Case History

A 33-year-old female presented at this office for care secondary to an attack that included strangulation and repeated facial trauma. Her main symptom was chronic debilitating headaches unresponsive to rest, medication, or other interventions. Prior to being seen at this office she was under the care of a neurologist and taking medications, which caused her extreme side-effects, yet did not relieve her headaches.

Method/Approach

She has been under care for three years, which consisted of chiropractic sacro occipital technique (SOT) and cranial treatment. (4, 5) Within the past year laboratory tests were instituted to monitor neurotransmitter balance of the HPA axis and used to help direct nutritional supplementation. The patient was seen once per week for chiropractic care and laboratory tests, while usually performed every 4 months, in this case was performed annually. This was due to the patient not performing the laboratory tests in a timely manner, believed due to her profile, which included inability to cognitively function in scheduling situations.

Results/Effects

Overall her symptoms improved which included headaches, which are less frequent, and less debilitating. Her headaches went from being daily constant, and chronic to 2-3 times per week with significantly less intensity and debilitation, allowing her to function in her activities of daily living. Prior to care she could not function when she had a headache. While she was making good progress with the chiropractic care during the 1st two-years, when nutritional supplementation based on laboratory analysis for neurotransmitter balance was instituted, headaches and function improved including better sleep patterns and mental clarity.

Discussion

With minor TBI or head trauma side-effects can present even in the absence of loss of consciousness. *'In fact, there is no significant difference in frequency of reported symptoms in patients who are only stunned or dazed when compared with patients having suffered a brief period of unconsciousness. While occasionally these symptoms may be ascribed to specific injury to certain tissues of the head, experimental studies reflect that the majority of time the injury is to fine processes of the nervous system and to neurotransmitter systems'*. (6) Also while considered not related to TBI one theory of the cause of complex regional pain syndrome (CRPS) may be due to the *'increase in the sensitivity of neurotransmitter receptors may be the cause of CRPS'* Alteration in these neurotransmitter receptors secondary to head trauma may be related to patients presenting with TBI and chronic pain.

Patients presenting with complex presentations secondary to TBI often are at a loss at what they might do for care. A study has found that rehabilitation can be effective using an interdisciplinary approach and *'recovery from TBI can continue for at least 5 years after injury'*. (8) In another study they found *'that traumatic brain injury may cause decades-lasting vulnerability to psychiatric illness in some individuals'*. (9) and for a *'subset of persons with moderate to severe TBI, neuropsychological recovery may continue several years after injury with substantial recovery'*. (10) A recent case series illustrated how SOT cranial care could be an effective tool in the treatment of three patients presenting with TBI11.

Conclusion

Treatment of brain trauma is a very individualized process and what may help one patient may not help another. It is not possible with case reports to determine if effective treatment for one patient can be generalized to the brain trauma population at large.

However, it is worthy of consideration when a patient does not respond or has an adverse reaction to medications and is non-responsive to traditional approaches that a chiropractor trained in SOT and cranial treatments might be considered for collaborative care. Greater research is needed in interdisciplinary settings to determine how this subset of patients may be best served.

Esther M Remata

DC

Private Practice, Clemmons NC



Charles L Blum

DC

drcblum@aol.com

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