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Sacro occipital technique, stability testing, and Tai Chi or yoga: A case report.
Timothy M. Barr, DC

**Introduction:** Both Yoga and Tai Chi can help patients with specific joint difficulties can find ways of performing exercise at their personal limits and still develop improved flexibility and stability. This case report investigates how Tai Chi “sequences” or yoga “poses” could serve as a patient self evaluation tool.

**Case Report:** A 65 year old female presented with generalized back and neck pain who noted when performing Tai Chi and Yoga could not accomplish movements that included flexion at the hip while standing.

**Methods/Interventions:** Evaluation demonstrated a sacroiliac joint hypermobility syndrome and treatment focused on supine pelvic block placement with functional reassessments.

**Results:** Following the first office visit for this condition the patient immediately demonstrated a well balanced “tree pose” but could only accomplish the kicking portion of the Tai Chi movement when sacroiliac trochanter belt was applied.

**Discussion:** Utilizing yoga and Tai Chi postures may help a patient determine when chiropractic care may be appropriate and sets up a patient driven healthcare interaction which is preferable to both doctor and patient.

**Conclusion:** Further study is needed for patients to be able to self-assess when it may be appropriate for them to seek preventative chiropractic care. *(This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)*

[This abbreviated abstract is from a full text abstract, one of the 28 full text abstracts from the 2009 Conference Proceedings offering abstracts relating to SOT, cranial techniques, and dental chiropractic co-treatment of TMD. Over 100 pages. http://www.sotousa.com/wp/?p=442]
SOT Cranial and TMJ therapy for unresolved BPPV: A case report

Thomas Bloink, DC

Introduction: Vertigo accounts for about 6-million clinic visits in the U.S. every year, and 17–42% of these patients eventually are diagnosed with benign paroxysmal positional vertigo (BPPV).

Case Report: A 37-year-old female was seen for BPPV referred by her allopathic physician for chiropractic care. The patient had 2-3 months of constant vertigo, unresponsive to medications and prohibited her from driving or walking without difficulty.

Methods/Interventions: Evaluation determined a sacroiliac joint hypermobility syndrome (category two), right temporal bone restricted in external rotation, and significant malocclusion with clenching. Category two protocols for the pelvis were applied along with cranial and TMJ therapies. Dental co-treatment was necessary to sustain the cranial and TMJ corrections.

Results: By the 7th office visit (3-4 weeks of care) the patient’s vertigo had resolved, her category two stabilized, and TMJ translation had improved without pain.

Discussion: Since it is not uncommon for cranial trauma to affect cranial nerve function, it is possible that low-level sustained cranial stress or trauma could be contributory to low-level clinical presentations such as BPPV.

Conclusion: The patient’s rapid response to care suggests further investigation is warranted into this method of care for patients presenting with BPPV. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Introduction: In conditions where a chiropractor or dentist has reached a therapeutic impasse with a patient’s temporomandibular/craniofacial disorders (TMD/CMD), cotreatment may be indicated.

Intervention: The treatment with these two patients had similar aspects in that they both presented with sacroiliac joint hypermobility syndrome (category two), cervical intersegmental restricted motion, and needed craniomandibular balancing therapeutic interventions.

Results: The essential findings in both cases showed reduced pain in TMJ function and/or symmetrical joint translation without crepitus. General relaxation in cervicocranial and craniomandibular musculature was noted by the patient, chiropractor and dentist. The focus was having the patient gain independence from chiropractic/dental care with reduced discomfort and increased function.

Discussion: With a subset of patients body posture has been found to affect or be affected by dental occlusion, condylar position, and airway space. A main obstacle for chiropractic/dental cotreatment is the lack of awareness and knowledge of each other’s professional treatment and diagnostic focus as well terminology. A relationship has been found between ascending/descending and CMD/TMD and postural dysfunctions.

Conclusion: While these two cases illustrate how the chiropractic and dental fields can work together for successful treatment outcomes, there is a need to determine what subsets of patients may fit this model. (This is an abstract from a conference presentation only and does not represent a full work that has been peer-reviewed and accepted for publication.)

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The relationship between the trapezius muscle and spinal segments T1 to L5

Shaun Cashman DC, MSc, Sharyn Eaton DC, PhD, Rodney Bonello DC, MHA, and Julian Leslie PhD

Introduction: The trapezius fibre technique, developed by DeJarnette suggests that specific position of a trapezius muscular nodule relates to a level of vertebral dysfunction. This study attempted to evaluate the inter and intra-examiner reliability in detecting these nodules in the trapezius and secondly to confirm their presence using various imaging modalities.

Methods: Two-reliability studies were conducted using experienced Sacro Occipital Technique practitioners who were blindfolded and asked to examine 50-subjects. Recordings were made of their findings and a statistical analysis performed along with various imaging devices considered to visualise trapezius fibre nodules.

Results: 72% of cases had a level of inter-examiner agreement whereas intra-examiner study found faultless agreement in 56% of cases, rising to 89% for a minimum level of agreement. Digital Infrared Thermal Imaging findings were inconclusive.

Discussion: A marked difference in the level of interexaminer reliability was found between the first and second trial. The second trial had improved findings likely due a number of standardising sessions in which a positive finding agreement was reached between the examiners.

Conclusion: These results suggest that experienced practitioners have a clinically viable level of agreement in locating these nodules in the trapezius muscle. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Introduction: In this era of evidence-based dentistry, the profession may be limited by unexamined assumptions that form the framework of our diagnoses and treatment. A system of care called “functional orthopedics” offers a different paradigm based on maxillary expansion and mandible repositioning.

Case Report Series: While each patient’s (n=13) presentation was different from the other they all presented with dental malocclusions and reported varying degrees of cranio-mandibular dysfunction. The patient’s medical histories were non-contributory.

Methods and Intervention: The goal of functional orthopedic treatment is to correct the pre-existing maxillary deficiency, reposition the mandible, and avoid extractions or surgery if at all possible.

Results: Downward and forward repositioning of the mandible was dramatic with changes in the adult, “non-growing” patients, changes that would only be possible with significant correction in the cranio-cervical musculature.

Discussion: Maxillary malocclusion - narrow arch, cross-bite, deep anterior over-bite, or division 2 type incisor position - actually create impedance inhibiting the mandible from positioning downward and forward to achieve a physiological compatible rest position.

Conclusion: With posture having influence on the stomatognathic system and maxillary expansion and mandible positioning likewise affecting cervicocranial posture the implications for the dental and chiropractic co-treatment can be profound. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Introduction: Knowledge on the incidence, prevalence and natural history of gastroesophageal reflux disease (GERD) is limited. The objective of this study was to investigate the alterations of dyspeptic signs and symptoms in patients presenting with GERD following chiropractic treatment.

Methods: This was a pilot study with a sample composed of 10 individuals sent for chiropractic treatment by a gastroenterologist surgeon. High digestive endoscopy exam was performed on all individuals before and after 8 sessions of SOT/CMRT chiropractic treatment. A gastroesophageal reflux disease symptom’s questionnaire and the results from high digestive endoscopy exams were used to evaluate dyspeptic signs and symptoms.

Results: At the end of chiropractic treatment a statistically significant global reduction of GERD symptoms was observed (p=0.0002) especially on the evaluation of pre and post treatment postprandial pyrosis data (p=0.000004). Through endoscopic examinations on the 10 patients the findings noted a 58% improvement of esophagitis caused by GERD.

Discussion: There is some research to suggest that stimulation of spinal structures may have a connection with reflex responses of the autonomic nervous system, which in turn may alter visceral functioning.

Conclusion: 10-cases treated with chiropractic treatment (CMRT) noted improved esophagitis signs secondary to GERD (high digestive endoscopy exam). (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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A research on the effects of the chiropractic treatment on individuals with malocclusion as an aid to the orthodontic treatment

Fabio Dal Bello, DC & Franciele Borilli, DC

Introduction: Malocclusion is the second cause related to TMJ pain complaints due to the non-stable dental occlusion leading to functional imbalance between the TMJ and the neuromuscular system of the jaw. To improve outcomes the use of allied therapies to treat the TMJ and musculature may help assist the dental orthopedic/orthodontic treatment.

Methods: The patients of this study were referred for chiropractic treatment (4-visits) by their orthodontist before continuing with orthodontic treatment. All patients had a diagnosis of malocclusion and related TMJ pain and a satisfaction questionnaire was used after the orthodontist’s second and last evaluation.

Results: The research showed that in 50% of the orthodontic cases there was a positive response in relation to the patient’s occlusal condition. In 66% of the cases the orthodontist found a positive relationship between chiropractic treatment and reduced malocclusion. 83% of the cases the orthodontist found that the chiropractic treatment was a positive tool to facilitate orthodontic treatment.

Conclusion: The results of this study suggest the chiropractic treatment when allied to the orthodontic professional could help facilitate improved patient outcomes. Interdisciplinary work between chiropractors and orthodontists could help promote a greater quality of life to the individual with occlusion disorders. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Introduction: The interrelation between joint, muscles and nerves suggests that malocclusion has a relationship with TMJ symptoms, the cervical spine, and the whole-body kinematic chain. The purpose of this study was to approach the relationship of the TMJ to the whole body.

Methods: The study investigated two non-equivalent comparison groups of six-individuals between 10-25-years-old participated in this research study with an orthodontics’ diagnosis of malocclusion and TMJ pain. The individuals were divided consecutively into two different groups of treatment. The first group was treated with cervical manual adjustments and the second group treated with the basic protocol of the sacro occipital technique (SOT) at treatment intervals of 4-visits during a month. Quality of life questionnaires and a visual analogical scale (VAS) were used in the first and in the last visit to evaluate the patient’s response to treatment.

Results: The research showed that in 83% of the cases there was a decrease in TMJ pain in individuals with malocclusion. Both treatments had shown to be effective for the TMJ symptoms, not only for pain and related dysfunctions.

Conclusion: Study into the relationship of chiropractic co-treatment of TMJ related dysfunction appears indicated based on the finding of this pilot study. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Attention deficit hyperactive disorder of a 7 year old child utilizing chiropractic and sacro occipital technique procedures

Scott Darragh, DC

Introduction: A 3-year-old male child was diagnosed by psychiatrist with attention deficit hyperactive disorder (ADHD) and from 3-7 years the child was prescribed anti-psychotropic medications. Parents were under extreme stress and sought chiropractic care as a last resort at age 7. Radiographs and motion palpation revealed dysfunctional vertebral intersegmental ranges of motion in the lower cervical and upper thoracic spine. Pelvic torsion was also identified.

Intervention: Treatment consisted of mirror image toggle recoil adjustment of lateral atlas and anteriorities of the thoracic spine with pelvic torsion treated using category one prone blocking. Initially the patient was seen 3-times a week for 4-weeks, 2-times a week for 4-6 weeks and following the 24th office visit the patient was seen approximately 1-2 times per month for 1-year.

Results: Following 1-month of care the patient demonstrated significant behavior improvements with improved postural symmetry and spinal ranges of motion. After 5-months of chiropractic care the child was weaned off all psychotropic medication by psychiatrist without any relapse.

Conclusion: Greater research is needed into the study of chiropractic care of pediatric patients and particularly the neurological interrelationships which may play a significant factor in the etiology of some subsets of children diagnosed with ADHD. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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The development of SOT occipital fiber technique: A case report

Charles L. Blum, DC & Major Bertrand DeJarnette, DO, DC (Deceased)

Introduction: The following case report was created based on the writing of DeJarnette who used a patient’s presentation and response to care as a reason as the development of his occipital fiber technique.

Case Report: A home visit was made (in 1925) to treat what was a boy diagnosed with meningitis. The parents had been told that the boy would not live until night. Treatment was challenging due to the body rigidity with the patient’s skull pulled to the right and down toward his shoulder.

Treatment/Intervention: Due to the patient’s presenting position an “occipital condyle traction adjustment” was performed that morning and “repeated it twenty-five times in the next twelve hours” by lifting of the right occiput with a jerking maneuver.

Results: Each time the occipital condyle traction adjustment was applied, the spasms would lessen. Within an hour, the opisthotonos diminished with body relaxation, breathing slowed dramatically, the fever decreased and by 3.00PM he was asleep.

Conclusion: This case report is taken from a relatively informal newsletter describing an event that took place close to a 85 years earlier. It is possible that the treatment was related to the “jolt accentuation maneuver” and the patient did not have meningitis, yet had symptomatic improvement from the intervention. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Patient with severe tremors, complex pain syndrome, and migraines co-treated with dental and SOT chiropractic care: A case report

Richard C. Gerardo, DC

Introduction: A 42-year-old female presented with an unsteady Parkinsonian type of gait diagnosed as psychogenically driven. She also diagnosed with an atypical version of a complex regional pain syndrome (CRPS) called complex pain syndrome (CPS) due to its whole body generalization as well as a history of migraines.

Methods/Treatment: Initially the patient was co-treated with a dental night and day time appliance, trochanter belt, and treated with category two protocols, sutural cranial temporomandibular joint (TMJ) interventions, T8 chiropractic manipulative reflex technique (CMRT) with supportive nutritional modifications to support liver function and reduce inflammation.

Results: At the first office visit with the dental appliance, trochanter belt and category treatment all her shaking stopped when standing and her pain was reduced. The patient’s medications was significantly decreased.

Discussion: It is interesting that a relationship appears to have been found with this patient’s severe tremors, migratory joint pain, and migraines and her pelvis and TMJ function. Her tremors could be affected by having a trochanter belt placed and would return when it was removed.

Conclusion: The future challenge is developing a predictive group of tests to determine what subset of patient with severe tremors, fibromyalgia, and migraines would be responsive to this type of care. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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**Introduction:** The purpose of the paper is to describe 2 case reports of symptomatic sciatica and lumbar disc herniation, successfully treated using sacro-occipital category three block positioning and disc technique procedures.

**Case Report:** Patient #1 was a male patient presented with right posteriolateral thigh pain persisting for two-days. Patient #2 was a male patient presenting with lower back pain localizing to the lumbosacral region, right sacroiliac, and hip joints with radiculitis below knee and left antalgic lean.

**Treatment/Intervention:** Patient #1 received category three block treatment, sitting disc technique, and was treated for a right piriformis muscle syndrome. Patient #2 received category three block treatment, sitting disc technique and, was treated for a left piriformis muscle syndrome.

**Results:** Patient #1 was treated for 6-office visits and had significant improvement with decreased pain and improved function along with a negative SOTO test. Patient #2 was treated for 8-office visits with reduced pain, peripheralization and psoas muscle tension.

**Conclusion:** With a subset of patients with severe pain and high fear avoidance behavior slow gentle pressure may be a viable option for treatment. This report suggests that chiropractic treatment of symptomatic lumbar disc disorders may be effectively treated via use of SOT procedures: pelvic blocks, SOTO, and sitting disc technique.

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**Cervicocranial and craniocervical syndromes: A case report**

I. Harvey Getzoff DC

**Introduction:** While there is a paucity of information regarding chiropractic treatment of cervicocranial/craniocervical syndromes (CC/CC S) or related pain, it does appear that a subset of patients that will need dental-chiropractic co-treatment.

**Case Report:** A 48 year old female presented with neck pain in the suboccipital area along with left ear and jaw pain, and frontal headaches.

**Methods and Intervention:** The patient had increased sensitivity at the 1st left costovertebral junction, inferior left occiput, and reduced cervical ranges of motion treated with cervical stairstep adjustments. A line-two area-three occipital fiber, T5 reflex was treated. A left reduced hip internal rotation and positive arm fossa test was treated as a category two. Cranial treatment focused to marked restriction at the right maxillary zygomatic suture.

**Results:** The patient was seen initially 2-times per week and ultimately for 19-office visits at two-times per month. Postural stability improved along with reduced reflex point sensitivities. Ranges of motion of the left hip and cervical region normalized. Category two indicators resolved and craniofacial palpation revealed improved motion and less pain at the right maxillary zygomatic suture.

**Conclusion:** Due to the chronic nature of the patient’s dental orthopedic dysfunction she was referred for dental co-treatment and her condition is stabilizing and improving. *(This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)*

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**Introduction:** Recent findings have indicated that there may be non-pharmaceutical approaches to the treatment of fibromyalgia syndrome and its myriad of symptoms.

**Case Report:** A 49-year-old patient diagnosed with a severe debilitating fibromyalgia syndrome, multiple gastrointestinal disorders, and headaches all determined to have been triggered by a trauma persisting for 8 years.

**Methods/Interventions:** SOT protocols and neurology analysis were used on the patient. At the initiation of the treatment the patient was treated for pain control utilizing category three procedures focused on L4/L5 and L5/S1 discopathy, piriformis and psoas balancing, category two sacroiliac hypermobility and cranial TMJ procedures.

**Results:** The patient reported significant relief of her chronic lower back and lower extremity pain following her first visit and following each procedure the patient reported marked reduction in her migratory pains. By three months of care her symptoms had resolved and she had returned to her activities of daily living as she had prior to the 2002 airplane incident.

**Conclusion:** This patient presented with a severe form of fibromyalgia syndrome triggered by a stress response associated with air travel. It may be that specific subsets of patients may respond to non-pharmaceutical interventions such as chiropractic care and in particular SOT with its integrative therapeutic applications. *(This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)*

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Introduction: This case series reviews 4 patients who presented to this clinic diagnosed with fibromyalgia syndrome (FMS), and were later re-diagnosed and treated as faux fibromyalgia syndrome (FFMS) patient. While having a positive response to FFMS care, they simultaneously a positive nonmusculoskeletal response coinciding with improved vision.

Methods/Treatment: Treatment consisted of category two analysis and treatment, SOT extremity techniques, and complete cranial sutural analysis and treatment and later in therapy rehabilitative exercises using therapeutic bands and a “rebounder.”

Results: Within six weeks of SOT and cranial care these FFMS patient’s symptoms resolved to the point that as long as they were within a few days of receiving care they were asymptomatic. Of interest is that as their FFMS symptoms resolved a concurrent improvement in vision occurred that involved improved acuity or color discernment.

Conclusion: With SOT and cranial care, a subset of patients FMS could be reclassified into a novel diagnostic form of FMS called FFMS. As further study increases into chiropractic myofascial and neurological relationships, we may better gain a grasp why some patients presenting with musculoskeletal conditions may have simultaneous self reported positive non-musculoskeletal results, such as an improvement of vision. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Chiropractic manipulative reflex technique (CMRT) treatment for GERD of a 3 year old male child: A case report

Robert D. Klingensmith, DC

Introduction: This is a single case study involving a 3 year old male being treated medically for gastroesophageal reflux disease with various antacids (Prilosec) since the age of 2 months and Prilosec since the age of 24 months. Chiropractic Manipulative Reflex Therapy (CMRT) was used to treat the patient for gastroesophageal reflux disease (GERD).

Methods: The patient received 5 treatments of CMRT protocol for occipital fiber-3, line-2 T5 with the stomach reflex manipulated at intervals of one day and then 3 days.

Results: By the fifth visit was two weeks after the initial treatment and the mother reported no reflux pain, sleeping well, no “belly aching,” and that she had discontinued the Prilosec after the second treatment.

Conclusions: Positive outcomes such as this offer the incentive to warrant further pediatric studies to determine consistency of outcome with chiropractic interventions and particularly CMRT for GERD. While it is essential to determine what subset of pediatric patients with GERD may benefit from this care a short period of trial therapy may function as a diagnostic test and a viable option to GERD that is unremitting in a young child. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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The effects of SOT category blocking procedures on lower extremity function in high performance athletes: A case series

Curtis Langer DC

**Introduction:** Explored in this case study is whether chiropractic care could be valuable for the elite athlete where it is essential that they have the ability to train, recover, and excel in their specific activity.

**Case Report Subjects:** The following three subjects in this study 33-year-old male mountain biker, 37-year-old female mountain biker, and 54-year-old male tri-athlete at one time would present with neck pain, gluteal tightness, pain in the Achilles tendon, knee pain, TMJ tension, wrist pain, shoulder pain and delayed recovery from physical exertion.

**Method:** The three subjects were examined and evaluated using Sacro-Occipital Technique (SOT) procedures, including SOT categorization, testing for symmetry of muscle flexibility, strength and function, sensitivity to palpation of specific muscle’s bellies and tendons.

**Results:** Following the SOT blocking procedures, which would vary between category one or two interventions, the patients demonstrated greater muscle strength, more stability where stability was diminished, reduced pain on palpation and absence of cramping on muscle testing.

**Conclusion:** What is suggested in this study is that all the SOT categories can affect function of the lower extremities and that basic SOT category treatment (blocking procedures) may be effective in improving strength, balance, and stability of elite athletes. (*This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.*)

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Dental chiropractic co-treatment of patient presenting with chronic severe fibromyalgia, head, neck, and jaw pain with depression

Jeffrey A. Mersky, DC & William Halligan, DDS

Introduction: It is possible that patients with TMD related symptoms and related patterns of postural dysfunction may benefit from dental chiropractic co-treatment and offer patients a viable alternative for recalcitrant pain and discomfort.

Case Report: A 35-year-old female was referred by her dentist for dental chiropractic co-treatment of multiple chronic fibromyalgia, along with severe head, neck, and jaw pain with depression sought chiropractic and dental care as her “last resort.”

Methods: As the patient used the splint for day and night-time the SOT, cranial, and CMRT care then was used to assist her body’s ability to accommodate to descending postural influences from her adjusted new occlusion.

Results: Chiropractic and dental evaluations 5-weeks post-treatment found that the patient had markedly decreased pain with 28 fibromyalgia trigger points reduced to two, medications were reduced, sleep and activities of daily living were improved. Her biofeedback practitioner found significant improvement of EEG findings with dental splint in place compared to without.

Conclusion: The future of healthcare will likely include interdisciplinary co-treatment involving low-risk procedures, offering alternatives to long-term medication use, and extensive invasive costly procedures. It was significant that the patient was non-responsive to prior therapies; her condition was degenerating, yet had a recovery immediately following care. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Sacro occipital technique treatment of hiatal (hiatus) hernia presentation: A case report

Gary A. Mitchell DC

Introduction: A 54-year-old male patient presented with severe pain in the epigastric area worse with deep breathing, eating any food, and unremitting persistent upper abdominal aching, fullness, and throbbing pain. The patient was unable to sleep due to pain, and nothing he could do would relieve his pain or discomfort. The condition had persisted for three-days before he sought treatment at my office.

Intervention: Treatment involved adjustment of “anteriorities” in the T11-L2 region, releasing of diaphragmatic tension in the mid and left lower rib region, sacrooccipital technique (SOT) chiropractic manipulative reflex technique (CMRT) hiatal hernia (HH) release technique (gently pulling stomach downwards during exhalation) and solar plexus technique.

Results: Immediately upon pulling the stomach downward the patient sighed and said he could breathe comfortably for the first time. Approximately 2-minutes he reported the constant tension in the epigastric which had persisted for three days had gone. A week following he indicated he was eating and functioning normally without discomfort and at 2-year follow-up indicated the condition had never returned.

Conclusion: Greater investigations should be performed to determine which patients may be presenting with HH that could be associated with diaphragmatic imbalance reducing sphincter action and affecting the stomach’s relationship to the diaphragm. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Effects of pregnancy on cranial structures
Frank O. Pederick DC

**Introduction:** A relationship between women’s brain volume and pregnancy has been found in the literature. Responses to this change in brain volume have also been associated with neurohormonal reactions before and after pregnancy.

**Diagnostic Intervention:** A modified Malcolm Test has been proposed by Kotheimer for assessing spinal and cranial distortions. This test relies on observation of changes in leg length when a subluxated spinal segment or cranial bone has pressure applied in a specific direction. Before making this test on the cranium, the recommended procedure is to make every effort to reduce structural distortions and restrictions in the rest of the body to minimize somato-somatic reflex effects.

**Treatment Rational:** The effect of the pressure changes may relate to primary restriction in the motion of the skull in the sagittal plane. The cranial sinuses are associated with the major membranes in the cranial cavity and may be affected by restricted motion of related cranial bones which can be palpable by and released by a trained practitioner.

**Conclusion:** The effect of cranial work on women during and after pregnancy is a matter which could be the subject of many case reports. There could be a prophylactic role for cranial work in controlling pre-eclampsia. *(This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)*

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Chiropractic cranial treatment protocol increases successful outcome of the multidisciplinary care model for traumatic brain injury (TBI) patients: A case series

Esther M. Remeta, DC, Charles L. Blum, DC

Introduction: Notoriously, all traumatic brain injury creates challenges that have various levels of negative impact on the patient’s life and family. The goal of care should be to relieve patients of disability and pain while facilitating their ability to have normal activities of daily living.

Case Reports: 28-year-old female suffered TBI from a violent attack with severe debilitating headaches requiring bed rest for two-years with condition devolving prior to initial office visit. 30-year-old female sustained a TBI from a motor vehicle accident with chronic headaches of 2-year duration with transient paralysis of her left extremities and short term memory loss. 70-year-old male suffered a TBI from a stroke causing paralysis of the right upper and lower extremity with swallowing and speech difficulties.

Treatment/Intervention: The focal point of this multidisciplinary care is sacrooccipital technique (SOT) cranial manipulation protocols along with specific neurological rehabilitation training and home exercises implemented for 1-year with most patients and remaining in care for 5-years.

Results: All three cases noted significant improvement with virtual elimination of medications as well as a return to activities of daily living prior to TBI.

Conclusion: Highest success was achieved with the 5-year model and with the inclusion of SOT cranial manipulation protocols. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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SOT chiropractic care of a six-year old boy diagnosed with Asperger’s Syndrome and related conditions

Martin G. Rosen DC

Introduction: The field of chiropractic may play a part in the treatment of autism spectrum disorders [4] and sacro occipital technique (SOT) and cranial techniques have been found to be of promise for improving symptoms and function.

Case History: A six-year-old male patient was brought to this office for SOT and cranial chiropractic care at this office. Initial complaints included: Asperger’s Syndrome (3-year duration) that resulted in uncontrollable “rocking, jumping and flapping” of his hands, asthma triggered by exertion, and severe seasonal allergies.

Methods - Treatment/Intervention: Specific SOT (Sacro Occipital Technique) spinal and cranial evaluation revealed subluxation patterns and a treatment program was implemented to address these patterns using SOT protocols and procedures.

Results: The patient and family reported that the Asperger’s Syndrome symptoms “settled down within the first week of care,” he was seen once a week for 5-months, reduced to a wellness treatment schedule which for him was 1-2 times per month. At 8-year follow-up, his condition has remained stable.

Conclusion: With the risk benefit ratios associated with the reduced risk of chiropractic care with increased risk of the typical medications used for this condition, a trial of chiropractic care for children or adults with this condition may yield important information. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Sacro occipital technique treatment of patient with pervasive craniofacial and body pains secondary to chronic TMD: A case report

Albert R. Salem DC

Introduction: For chronic low back, neck, head and TMD there are various types of treatments from conservative care involving exercises or other methods of treatment such as chiropractic care or dental appliances.

Case Report: A 54-year-old female, housewife, was seen in this clinic for chronic low back, neck, head and jaw pain which began in 1990 and persisted for 18-years.

Treatment/Intervention: During the month of care following the patient’s initial presentation she was treated with sacro occipital technique (SOT) and cranial techniques. As part of the evaluation and treatment process to relieve discomfort and increase TMJ function, the patient was instructed to insert a simple “gapping device,” a tongue depressor placed between her front upper and lower incisors, and use this “device” for a few periods each day.

Results: Following the 2nd office visit the patient reported “the pain around my head and face stopped. During the initial month of care, she was seen 2-times per week, totaling 8 consults. At 7-weeks, a full cranial sutural treatment resulted in the patient's jaw normalizing translation, excursions, and without crepitus.

Conclusion: Further research is indicated to determine what subset of patients with generalized body pain and TMD might best respond to chiropractic care. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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Pregnancy, sacroiliac joint laxity, and the SOT category two pelvic distortion: A case series

J. Rodney Shelley, DC

**Introduction:** Sacro occipital technique (SOT) describes a category (category two) of pelvic girdle pain and/or low back pain (PLPP) associated with increased posterior SI joint ligamentous laxity. This retrospective case series study involved 103 pregnant women age range from 21-32 years old were seen at this clinic from 1979-83.

**Methods:** Patients were evaluated via SOT diagnostic protocol, which included the SOT arm fossa test (AFT), increased unilateral or bilateral iliopsoas tension, palpation for pelvic torsion, leg length differentials, and Moiré contour photography.

**Results:** Using SOT’s arm fossa test as a method to evaluate sacroiliac joint laxity, a large percentage of the patients (95%) had AFT positive (AFT+) findings, with 5 of the 103 patients having an AFT negative (AFT-). AFT- findings were associated with reduction or elimination of pelvic or inguinal pain, improvement of muscle strength and ability to rise from seated position as well as lift or carry objects, and improved sleeping and restfulness.

**Conclusion:** Further study would be of value to determine if the AFT can become part of a series of tests used to assess the need for care of PPLP as well as if there is successful patient response to treatment. *(This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)*

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The relationship between a C2 subluxation and vital signs in a Duchenne’s muscular dystrophy patient: A case report

Noel A. Taylor, MM, DC

**Introduction:** A mid-40 male quadriplegic secondary to Duchenne's muscular dystrophy, and living in a nursing home. He had use of his left thumb to control a joystick or mouse, could talk and breathe.

**Methods/Treatment:** The patient had difficulty breathing one night and was sent to local emergency room. Vitals were O2 saturation in the mid-80's, BP 156/110, pulse 145, respiration 25, and temperature 100.5. At 36-hours he was transported with same his vitals however his head position was rotated left at 45 degree. The patient was unable to turn head to a neutral position and palpation revealed restriction due to a C2 left lamina protruding. He requested chiropractic assistance and using a Sacro-Occipital Technique (SOT) cervical protocol, sustained pressure was applied to the C2 left lamina from left posterior to right anterior with the protrusion resolved in 2-minutes.

**Results:** At 1-minute post-treatment, his O2 saturation moved from 87 to 98, pulse slowed to 116 (which is normal for him), respiration dropped to 13, and temperature dropped to 98.0.

**Conclusion:** Some studies have found blood pressure can be affected by chiropractic upper cervical adjustments, yet in this case the other vital signs were affected, whereas the blood pressure was not immediately resolved. (This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)

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**Introduction:** Integrative health for animals is increasing yet there is limited research specifically identifying the use of chiropractic in the equine and canine. A chiropractic technique called occipital fiber analysis and treatment (OFT), a part of sacro occipital technique (SOT) was used to analyze and treat thoracic, lumbar, and sacral segments. This study investigated whether the OFT could be found in canines and a treatment based on OFT would yield any response.

**Case Report:** A 10-year-old female cattle dog with known chronic symptoms of bloating, mood changes, joint pain, and chronic psoas tension, unresponsive to prior interventions, presented for chiropractic care.

**Methods and Intervention:** OCT was applied to a female 10-year-old canine and treatment consisted of chiropractic manipulative reflex technique (CMRT). The procedure was performed at the main campus of Options for Animals College of Animal Chiropractic; with the owner’s consent.

**Results:** Following the occipital analysis and treatment procedure the reflex pain areas were significantly diminished and the dog was relaxed, with decreased joint pain, and the psoas tension was notably less.

**Conclusion:** It did appear from the dog’s response that there was a positive correlation between OFT and CMRT typically applied to humans when applied to the dog in this study. *(This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)*

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Introduction: Integrative health for animals is increasing yet there is limited research specifically identifying the use of chiropractic in the equine and canine. A chiropractic technique called occipital fiber analysis and treatment (OFT), is used within sacro occipital technique (SOT) to analyze and treat thoracic, lumbar, and sacral segments. This study investigated whether the OFT could be found in equines and a treatment based on OFT would yield any response.

Case Report: A 10-year-old gelding quarter horse presented with symptoms of anxiety and stress induced behavior changes described by the owner.

Methods and Intervention: OCT was applied to a female 10-year-old quarter horse and treatment consisted of chiropractic manipulative reflex technique (CMRT). The procedure was performed at the main campus of Options for Animals College of Animal Chiropractic; with owner’s consent.

Results: Following the OCT procedure the reflex pain areas were significantly diminished and the horse was relaxed, calm, and more tolerant during the post exam. Bowel sounds were now more progressively motile.

Conclusion: Of interest is whether OFT reflexes could be found in quadrupeds. It did appear from the dog’s response that there was a positive correlation between OFT and CMRT typically applied to humans when applied to the horse in this study.

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Exercises and stretches to facilitate SOT blocking treatments category one and category two: A case series

William P. Williamson, DC

**Introduction:** The treatment of lower back conditions through the use of chiropractic manipulation can be facilitated by rehabilitative exercises and stretches, (E/S). A retrospective comparison study was performed of E/S applications to SOT category treatment from a 6-month period from May–December 2006 and June–December 2007 Cases were selected if: SOT category-1 or category-2 blocking was incorporated and if that patient completed care to the point where SOT blocking was no longer necessary.

**Methods and Intervention:** As a baseline testing muscle the hamstring muscle was used, because of its ease of access and its connection to the pelvic region. The patients tested were always in a prone position on the treatment table and were evaluated so that they could consistently respond to testing.

**Results:** The results of the four groups were generally standard across age and gender and the exercises appeared to facilitate a quicker recovery.

**Conclusion:** Muscle testing, like DeJarnette’s category system, provides a direction for further investigations by monitoring both a patient’s response to the muscle test and their ongoing outcome to the therapy rendered. When a patient’s response to typical SOT category one or two therapeutic intervention seems limited incorporating E/S specific maneuvers may be indicated. *(This is an abstract from a research conference presentation only and does not represent a full work that has been peer reviewed and accepted for publication.)*

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