# Abstract (List of Papers)

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- Sacro Occipital Technique (SOT) Category II Protocol Stabilized Chilean Athletes National Running Team Sacroiliac Dysfunction during Competition: A Retrospective Case Series
- Neuromuscular Dentistry
- Review of Cases using SOT/CMRT on Equine and Canine
Introduction: A 19-year-old male presented with a history of attempting a back flip on a trampoline but landed on his head and compressed his neck. While taking the case history his parent noted that he also had persistent and intense bruxism at night creating significant sounds that would awaken others near his room at night.

Case History: Evaluation revealed decreased cervical range of motion, category two sacroiliac joint sprain and significant TMJ related findings, relating to a dental class III (protruded) occlusion and concurrent class II (retruded) condylar position. He was treated with sacro occipital technique (SOT) category two block placement, cervical stairstep adjusting, and SOT cranial/TMJ related care.

Results: The cervical spine range of motion and pain improved immediately following the treatment. However the dental presentation suggested a referral to a dentist familiar with functional orthodontics and trained within a dental chiropractic co-treatment methodology.

Conclusion: The purpose of this case report was to illustrate a working treatment program where both chiropractic and dentistry can play an integral part in an attempt to improve patient care and outcomes. Further research is needed to investigate the subset of patients needing chiropractic and dental collaborative care for optimal outcomes.

This abbreviated abstract is from one of the 26 full text abstracts relating to topics such as SOT, cranial techniques, chiropractic manipulative reflex technique, occipital fiber diagnosis, and dental chiropractic co-treatment of TMD. Over 210 pages. http://www.sotousa.com/wp/?p=442
Introduction: Zenker’s diverticulum is a blind sac (pouch) that branches off the esophagus at the upper esophageal sphincter. While surgery is a common treatment for ZD, the purpose of this paper was to investigate whether Sacro-Occipital Technique (SOT) chiropractic care and soft tissue therapies could facilitate recovery of a patient.

Methods/Intervention A 71 year old male, 6’1”, weighing 191 pounds presented at this office with chief complaint of difficulty swallowing, associated with coughing when swallowing, and a diagnosis of ZD. Treatment utilized DeJarnette’s sutural protocol, adjustment to the cervical spine (cervical stairstep), shoulder girdle, category II block placement, lumbar adjustment, soft tissue release to the pharynx/larynx area, and modified Van Rumpt hiatal hernia release.

Results: Four treatments were given over a period of two weeks. Symptoms were improved after the first treatment and significantly by the second treatment. Between the second and third treatment session the patient underwent a laryngoscopy and was told that the ZD was not of sufficient size as to require surgery.

Conclusion: While there have been no studies reported utilizing conservative chiropractic methods and the treatment of ZD, it appears that such treatment in some instances may provide therapeutic benefit to those suffering from this disorder.

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Introduction: Pregnancy related low back pain is a common condition so healthcare providers need to be able to offer low-risk alternatives that would not harm the mother or child while reducing pain and disability.

Objective: The purpose of this paper is to provide information of a potential way of treating pregnant women with low back pain, using Sacro-Occipital Technique (SOT).

Methods: One subject with pregnancy related pelvis instability and prior chronic low back pain presented for care and was treated with Category II Sacro Occipital Technique protocols throughout the course of her pregnancy.

Results: Using Roland-Morris disability index, Oswestry disability index, and the Quadruple Visual Analogue Scale, the patient’s pain levels were monitored throughout the pregnancy before and after treatment. The patient had decreased scores on all scales after SOT treatment was instituted during her pregnancy with stabilization in her last trimester and continued improvement following her pregnancy.

Conclusion: In the case of this patient with chronic low back pain which continued into her pregnancy, SOT category II treatment appeared to have a benefit in reducing her pain levels as scored by Roland-Morris disability index, Oswestry disability index, and the Quadruple visual analogue scale.

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Parkinson’s Disease and Soft Tissue Orthopedics (STO): A Case Report

Davis KY

Introduction: This case report focuses on a patient with Parkinson’s disease (PD) with a relationship to genetic mutation involving the methylenetetrahydrofolate reductase (MTHFR) gene mutation.

Case Report: The patient is a 75 year old, with significant disturbances in her balance, co-ordination, and gait. Involuntary tremor was noticed in her left leg and ankle. Blood test revealed a MTHRF gene’s mutation.

Treatment: Sacro occipital technique (SOT) and soft tissue orthopedics (STO) were utilized to assess and treat spinal, soft tissue, and related visceral imbalance. Nutritional therapy was guided by the temporosphenoidal (TS) findings as blood test findings.

Results: In January 2013, the patient was re-evaluated by her neurologist who found a ninety-five per cent improvement. At her last treatment (January 22, 2013) she was found to be strong, stable, with significant balance and stability. Only a slight tremor in her left ankle was noticeable. It was recommended that she consider lifetime nutritional support for the MTHFR gene mutation.

Conclusion: This case discusses a patient who appeared to present with PD, had concomitant MTHFR gene mutation, and a history of a perforated colon. Further research is indicated into the role of SOT, STO, and nutritional modification in the treatment of PD.

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The Effects of Diversified Chiropractic Manipulation versus Sacro Occiptal Technique (SOT) in Chiropractic Management of Sacroiliac Syndrome

Del CL, Losco B, Losco CD

Introduction: The purpose of this pilot comparative study was to assess the effects of diversified manipulation (DM) versus sacro occiptal technique (SOT) in the management and treatment of sacroiliac syndrome (SS).

Methods: This study consisted of two groups; a DM group and a SOT group each consisting of 15 subjects (18-55 years) with SS, treated six-times over a two-week period. The objective measurement consisted of inclinometer range of motion readings of the thoraco-lumbar and lumbo-sacral regions of the spine in all directions. DM group received Thigh-Ilio-Deltoid manipulation whereas the SOT group received category two blocking (supine pelvic blocking reducing pelvic torsion).

Results: Digital inclinometer findings noted statistically significant improved lumbosacral ranges of motion in both groups, with particular increases in flexion/lateral-flexion in the SOT group and increases in extension/rotation in the DM group. Subjective outcome assessments showed statistically significant improvements with regards to OBPDIQ and NPRS for both groups.

Conclusion: The results of the study indicate that both SOT and DM had a positive effect on patients suffering from SS, with SOT care appearing to have a greater overall benefit. Since both techniques appeared to have a positive effect, the SOT care could be appropriate when a low-force intervention is preferred by the doctor/patient.

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The Validity and Specificity of the Arm Fossa Test

Evan AC, Yelverton C

**Introduction:** This study was designed to assess the validity and specificity of the Arm Fossa Test (AFT), which is part of the Sacro Occipital Technique (SOT) evaluation protocols. This may contribute to the research related to diagnostic tests that assess the specific joint dysfunction related to SJD.

**Methods:** Eighty subjects were selected for the study, 35 females and 45 males. The subjects were then taken to a different room where two assessors tested for SJD using the AFT each without knowledge of the other’s results.

**Results:** Of the 160 sacroiliac joints (right and left side for each of the 80 subjects) evaluated, the AFT correctly evaluated 166 (28 true positives and 88 true negatives). This gave a percentage correlation of 72.5%. The Kappa Coefficient, indicated as 0.40, is bordering on a moderate strength of agreement.

**Conclusion:** The AFT has some validity but should not be used on its own as a tool for the diagnosis of SJD but rather as part of a comprehensive diagnostic evaluation of the joint. Further research is needed to determine whether the AFT is better suited for evaluating the subset of patients with SJD that is related to hypermobility or SJD associated with hypomobility.

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**Introduction**: This case report discusses a 41-year-old male presenting with recurrent acute low back pain that was treated with analgesics, acupuncture, and a novel form of chiropractic, sacro occipital technique (SOT) pelvic blocking.

**Treatment/Intervention**: During his acute flare-ups, the patient incorporated Robaxin 500mg, acupuncture, and SOT blocking to help reduce pain and improve his function. Acupuncture was utilized within 12-hours of incident to facilitate with pain relief. SOT blocking followed by ice for 20-minutes was found to help him restore mobility.

**Results**: Outcome measures to the treatment rendered focused on the patient’s report of pain reduction along with his improved function, and ability to return to his usual activities of daily living.

**Conclusion**: Since acute low back pain is not something that patients will choose to “watch and wait,” developing methods of conservative are that are both safe and effective should be our first priority. This case study illustrated how a patient with chronic recurrent acute low back pain found an ability to cope utilizing muscle relaxants, acupuncture, and chiropractic. Further study is needed to determine if allied conservative methods can be generalized to the acute low back pain population and mitigate the need for greater risk procedures.

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Health promotion and prevention practice in a chiropractic teaching outpatient clinic: A continuing study to determine if patient file auditing reflects active health and wellness advice?

Floyd R

Introduction: To determine through retrospective patient file audits if patients received advice on health promotion, wellness or prevention based on risk indicators in one chiropractic teaching clinic.

Methods: One hundred patient files were randomly selected by chiropractic teaching assistants (CTAs). These were new patients seen on or after January 1, 2007. Personal history, family history, and red flags related to diseases that could be helped through health promotion interventions were extracted from the files.

Results: Health promotion advice on at least one occasion was noted in the patient chart of 91% of the sample. Of those either overweight or obese, 73% received advice on diet and nutrition; 80% received advice related to physical activity, but only 8% received advice on healthy weight management.

Conclusion: As standards and best practices are developed in the Sacro-Occipital community as well as the entire chiropractic profession regarding health promotion, it will become imperative that chiropractic institutions better assess patients’ health goals through proper tracking of patients and training for faculty clinicians and interns.

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The role of the atlas vertebrae in the Sacro Occipital Technique (SOT) category system

Getzoff H

Introduction: SOT considers the atlas to be an important part of the process of human function, and this presentation will attempt to illustrate how the atlas is intimately involved in the very nature of each of the three SOT categories. DeJarnette developed assessment and treatment tools to generalize patients’ presentations and divided them into three categories.

Discussion: In Category one, the atlas adjusts itself to a functional position that allows dural membrane tension to be maximized and plays an important role in cranial and sacral respiratory function and the movement of cerebral spinal. Category two is based on DeJarnette’s contention that cranial sutural dysfunction altering head posture through the atlas can be reflected throughout the entire postural system. In a category three the atlas acts in direct relationship with the fifth lumbar vertebrae. Tenderness and /or swelling of the lateral transverse process of the atlas is indicative of the fifth lumbar spinous rotation to that side.

Conclusion: When examining the multi-adaptive qualities of the atlas vertebrae and its position allowing for visual and vestibular accommodations, it is clear that it can enable functional systems to maintain themselves in the presence of structural breakdowns.

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The Relationship of Cranial Facial Growth and Development to the Sacro Occipital Technique (SOT) Category System: Three Case Studies

Getzoff H

Introduction: The intent of this paper is to utilize 3 case studies to examine whether deficiencies in cranial facial growth and development can impede normal homeostasis of functional systems as described by the SOT Categories. Category One addresses the Primary Cranial Sacral Respiratory Mechanism which consists of the inherent motion of the sacrum and the cranial bones/sutures, the dura and its attachments, the movement of cerebral spinal fluid and the expansion and contraction of the ventricles and the brain. Category Two addresses the weight bearing system are the weight bearing portion of the sacroiliac joint, the entire spine, the cranial suture system along with the position of the head. Category Three addresses subluxations of the lumbar spine and its compensatory methods.

Discussion: As demonstrated by Enlow and these case studies a “change in any given part must be proportionately matched by appropriate growth changes and adjustments in many other parts, nearby as well as distant, to sustain and progressively achieve functional and structural balance of the whole.”

Conclusion: It appears that head position and cranial function can be altered by deficiencies in cranial growth and development. Structural and functional systems also respond to head position and cranial function. Cranial and dental diagnosis can play a critical role in functional systems’ assessments (SOT categories).

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Introduction: Nephi Cottam is widely regarded in chiropractic circles as the originator of cranial manipulation in chiropractic, and William Garner Sutherland is often cited as the first developer in osteopathy. However, they were not the only practitioners to develop cranial concepts at the beginning of the 20th century. By mid-century, chiropractors Willard Carver, Leo L. Spears, and Major Bertrand DeJarnette as well as osteopaths Dain L. Tasker, Charlotte Weaver, and Beryl Arbuckle, to name just a few, had developed cranial concepts.

Discussion: This article identifies and discusses the available comparative literature on the history of cranial manipulation in chiropractic and osteopathy in the first half of the twentieth century, and concludes that there is a scarcity of in-depth, comparative literature examining the different cranial concepts coming out of those two professions.

Conclusion: Further comparative research would serve to foster a broader understanding of the roots of the phenomenon of cranial manipulation and the extent to which it evolved along a parallel time frame across the two professions. This investigation can serve to acknowledge the early pioneers in chiropractic and osteopathy who shared a legacy in the exploration of the cranium, its mobility, and its manipulation for health benefits.

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Improvement in the Quality of Life of a Patient with Aicardi Syndrome Undergoing Multiple Forms of Chiropractic Care: A Retrospective Case Study

Heinecke JD

**Introduction:** The goal of this retrospective case study is to demonstrate an increased quality of life for a patient with Aicardi syndrome undergoing multiple forms of chiropractic care including Diversified, Activator, and Sacro Occipital Techniques (SOT), specifically Cranial Technique.

**Clinical Features:** An adopted four-year-old girl presented to the clinic with a diagnosis of Aicardi syndrome which is a neurodevelopmental disorder associated with substantial and often severe motor and cognitive delays and seizures. The chief complaint and interest for chiropractic care was irritability which included prolonged crying, general dislike of touch and self-injurious behavior (SIB).

**Intervention and Outcomes:** The patient’s total duration of care was approximately 23 months with a total of 46 visits, undergoing care from three separate interns who did not overlap care. The patient was initially under chiropractic care using Diversified Technique, followed by Activator Technique, and lastly, SOT Cranial Technique. During care the patient increased in weight, while previously her weight remained unchanged for an entire year. She also ceased to exhibit SIB, demonstrating greater periods of calm. Also noted was a decrease in stress in the life of the caregiver.

**Conclusion:** Chiropractic care can be of great benefit in improving the quality of life in a patient with Aicardi syndrome and other congenital abnormalities.

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The accuracy of kinesiology-style manual muscle testing to distinguish true spoken statements from false: The results of 2 studies of diagnostic test accuracy

Jensen AM, Stevens R, Burls A

**Introduction:** Practitioners have used manual muscle testing (MMT) to assess neuromusculoskeletal integrity since early last century. This paper describes a series of diagnostic test accuracy studies aimed at developing evidence for one application of MMT: distinguishing true from false spoken statements via kinesiology-style MMT (kMMT).

**Methods:** kMMT practitioners and naïve test patients (TPs) were recruited. TPs were shown pictures and instructed to make simple statements about the picture, after which the kMMT was performed. The reference standard was the statements’ actual verity and the index test was kMMT. In Study I (n=48), each practitioner performed 40 kMMTs and 40 guesses. Study II (n=20) replicated Study I.

**Results:** In Study I practitioners correctly distinguished truth from falsehood in 69.3% (95% CI 66.0-72.5%) of statements more often than by chance alone (p<0.001), and in Study II, 63.1% (95% CI 56.8-64.9%; p=0.001).

**Discussion:** Significant differences were found between accuracy in identifying verity of spoken statements using MMT compared to chance. The main limitation of these studies is its lack of generalizability to other applications of kMMT and MMT.

**Conclusion:** kMMT when performed by a practitioner can distinguish true from false statements significantly more often than would be expected by chance alone.

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Fatigue, depression, and sleep disorders: A case report

Kalish D, Arick CT

Introduction: This study will present a case of one patient presented with fatigue, depression, and sleep problems to a functional medicine center.

Report Assessment: A 22-year-old man revealed that at the age of 18-months he acquired an Entamoeba histolytica infection. His diagnoses at the time of initial consultation were viral induced chronic fatigue and over training syndrome.

Lab Results: Helicobacter pylori, Giardia, Entamoeba histolytica, and Cryptosporidium parvum were found and the patient was determined to be in second stage adrenal exhaustion. Imbalances in the levels of serotonin and dopamine after an amino acid challenge were found. The heavy metal toxicity panel showed high levels of lead, mercury, barium, tellurium, and boron through urine testing.

Treatment/Intervention: Treatment consisted or dietary and supplement modification, adrenal support, interventions for gastrointestinal pathogens, neurotransmitter balance, and heavy metal detoxification.

Results: Pre- and post-lab work demonstrated his improvement in adrenal function, elimination of gastrointestinal tract infections, and reduction in heavy metal toxicity and improvement in brain function regarding OCT2 transporters.

Conclusion: This case report demonstrates the wide range of functional medicine tests available and how they can be used to treat conditions that are widespread and may not be as safely or effectively addressed by conventional medical options.

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**Introduction:** I am amazed that in the research world the case study report is relegated to the bottom of the evidence pile a notch above the anecdote which is just above the Old Wive’s Tale. As if what happens to you, me and our patients as individuals really doesn’t matter all that much. Even more amazing is that this label is perpetuated by researchers within the chiropractic profession itself. It amazes me because chiropractors have been helping people recover their health one person at a time for over a hundred years. Yet the randomized controlled clinical trial is held as the “end all be all” of research. The idea of taking three groups of people and applying an intervention, a placebo and no intervention and then extrapolating those results to millions is what we hang our hat on.

**Conclusion:** The focus of this commentary is to illustrate how the writing of a case study is important because it is most applicable to the average practitioner and the real world is where the practitioners exist. A guide to how to write a case study with methods of formatting the various sections is shared in this article.

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Orofacial myofunctional therapy: A case report
Moeller JL

**Introduction:** Orofacial myofunctional therapy, a neuro-muscular re-education of the oral facial muscles, is a modality that promotes the stability of the stomatognathic system.

**Case Report:** The patient was a 48 year old female referred by her chiropractor, who had heard about OMT by his referring functional dentist. Patient was born with a restricted lingual frenum which may have led to her low tongue-rest position and mouth breathing habit. In a craniofacial evaluation she exhibited an open mouth at rest, was clenching and grinding, and had an overbite, chronic sinus infections, vertigo for eight months, earaches, and intermittent tinnitus.

**Method/Intervention:** Treatment consisted of jaw stabilization exercises, habit elimination and behavior modification, and re-patterning the oral facial muscles and changing their function for optimal rest position, chewing and swallowing. The tongue does not drop into the airway.

**Results:** At a one-week follow up visit, after treatment for jaw stabilization, the patient reported that her pain was gone. Structural support incorporating chiropractic adjustments, along with eliminating habits and muscle re-patterning, led to long term stability.

**Conclusion:** An interdisciplinary team approach for health care is critical for benefit of the patient and treating the cause of TMJ and obstructive sleep apnea (OSA) related disorders.

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Resolution of acid reflux and associated symptoms in two infants undergoing chiropractic care

Orgel K

**Introduction**: To describe and evaluate the cases of two infants suffering from GERD (gastroesophageal reflux) and the effectiveness of the chiropractic care received on their symptoms.

**Clinical Features**: Two infants, aged five months and six weeks, with complaints of colic, acid reflux, sleeping problems, feeding problems and regurgitation, presented to a chiropractors office for evaluation and possible care. Both infants were previously diagnosed with GERD and prescribed drugs by their pediatricians with no resolution.

**Intervention and Outcomes**: Analysis of the components of VSC (vertebral subluxation complex) was assessed and the patients were adjusted accordingly, as needed, using Full Spine/ Diversified Technique. Both infants had symptoms of acid reflux resolved within a short duration of care. Mothers reported infants had a better disposition, seemed to be more comfortable and improved quality and duration of sleep. Additionally, both infants discontinued medication.

**Conclusion**: These cases are significant in providing an insight into the value of chiropractic care for infants with colic and GERD. These cases are by no means conclusive. Further research is warranted in the areas of Colic, GERD and chiropractic care among infants.

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Conjugate gaze visceral release in female chronic pelvic pain: A case study

Perri VL

**Introduction:** This is a clinical case study of a female patient with chronic pelvic pain who was unresponsive to medical management, but responded favorably to a manipulative reflex technique that expands upon Dr. DeJarnette’s CMRT.

**Clinical Features:** The patient’s symptoms were associated with abdomino-pelvic diffuse tenderness. She commonly suffered with painful coitus, colic, abdomino-pelvic spasm, chronic constipation, indigestion, dysmenorrhea and recurrent urinary tract infections. Post therapeutic evaluation included subjective analogue pain scale analysis, post manipulative palpation, subjective report of dysuria and urinalysis.

**Intervention and Outcome:** This case study utilized conjugate eye gazes and patient assisted movements to activate a balanced parasympathetic and sympathetic response to the reflex contact with the goal of stabilizing the dysfunctional organ. Fascial barriers that were unresponsive to a manipulative reflex contact appeared to release with use of conjugate eye gazes. Post manipulative pain at examination reduced from a 7/10 to a 2/10. Guarding mechanisms in the abdomino-pelvic musculature were markedly reduced, and over the course of several treatments her dysuria, chronic constipation and recurrent UTI’s resolved.

**Conclusion:** Through the use of manipulative techniques using conjugate eye movements and patient-assisted movements it may be possible to improve abnormal organ function and reduce the painful symptoms associated with uro-genital syndromes.

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Chiropractic care and its effects on a patient with a moderate traumatic brain injury

Pollard R

Introduction: The objective of this study was to determine the effectiveness of chiropractic care on a patient with a moderate traumatic brain injury.

Clinical Features: The patient is a 38-year-old male who suffered head trauma and may have had a subsequent bleed of a prior cavernous angioma creating neurological related complications affecting his ability to function. Additional complaints include significant difficulty with thought process, difficulty with concentration, irritability, phonophobic, difficulty reading and comprehending, blurred vision, dizziness, balance and gait issues, and sleep difficulty.

Intervention and Outcomes: The patient received sacro occipital technique (SOT), specific cranial work and blocking via category two specifications. The patient was also stretched and given exercises to perform at home. Treatment of his temporomandibular joint disorder was part of the care rendered.

Conclusion: The chiropractic supportive care has as its focus supporting his activities of daily living, preventing worsening of his symptoms and asymmetry, and continually working toward the possibility of improvement. With challenging TBI cases low-risk interdisciplinary care may hopefully represent future healthcare options for these patients. Also to be studied is whether supportive care represents an important strategy for TBI patients to prevent losing ability to function, having a decreased quality of life, and becoming an increased burden to society.

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A comparative study between the effects of side-lying sacroiliac adjustments and Sacro Occipital Technique on the muscle strength of the gastrocnemius muscle in asymptomatic adult males

Pretorius G, Yelverton C, Moodley M

Introduction: The purpose of this unblinded, randomised pilot comparative study was to determine if diversified chiropractic manipulation and/or SOT adjustments of the sacroiliac (SI) joint could increase short-term strength of the gastrocnemius muscle.

Methods: Ninety-asymptomatic male patients between the ages of 20-30 years were randomly divided into three-specific groups. Group FA (force adjustment) received “thigh-ilio-deltoid” diversified adjustments to the sacroiliac joint (SIJ). Group NA (non-force adjustment) received category one SOT adjustments to the SIJ with SOT blocking technique. Group C (control) received detuned ultrasound over the SIJ. Each patient received only one treatment. The objective data was collected using a plantar flexion isometric dynamometer measuring gastrocnemius muscle strength before and after the treatment.

Results: The results indicated that there was a statistically significant increase in gastrocnemius muscle strength in both adjustment experimental groups.

Conclusion: The positive effect noted in the non-force adjustment group suggests that force may not always be required to produce a therapeutic effect. It is possible that safer and less invasive techniques may thus be indicated on a more regular basis supporting both practitioner and patient alike. This study contributes to information about possible underlying mechanisms of the chiropractic adjustment and may support greater study of non-force chiropractic techniques.

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

Remeta EM, Blum CL

**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.

**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.

**Method/Approach:** She has been under care for three years, which consisted of chiropractic sacro occipital technique (SOT) and cranial treatment. Within the past year laboratory tests were instituted to monitor neurotransmitter balance of the HPA axis and used to help direct nutritional supplementation.

**Results/Effects:** While the 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.

**Conclusion:** 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.

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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

Remeta EM, Blum CL

Introduction: This article seeks to share a novel manner of multidisciplinary care, which incorporates the fields of allopathy, chiropractic, psychology, acupuncture, neurorehabilitation, and nutrition for the treatment of TBI.

Case Report: Case # 1: A 28 year old female suffered TBI from a violent attack resulting with severe debilitating headaches requiring daily bed rest for two years with her condition consistently devolving prior to initial office visit at this clinic. Case # 2: A 30 year old female sustained a TBI from a motor vehicle accident. PET scans noted decreased bilateral occipital lobe metabolic activity. Case # 3: A 70 year old male suffered a TBI from a stroke causing complete paralysis of the right upper and lower extremity. He also suffered from swallowing difficulty and speech problems.

Treatment/Intervention: A focal point of this multidisciplinary care at this clinic is Sacro Occipital Technique (SOT) cranial manipulation protocols along with specific neurological rehabilitation training and home exercises over a 5 year period.

Results: Significant improvement was noted in all cases with length of care varying from 8 months to 5 years.

Conclusion: This care model gives greater hope for those suffering from TBI as well as gives the health care profession at large more options to create treatment plans resulting in better prognosis.

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Resolution of a left sided 5th phalangeal 2nd inter-phalangeal joint stenosing tenosynovitis (trigger finger) in a 2 1/2 year-old female: A case report

Rosen MG

**Introduction:** While a condition such as stenosing tenosynovitis (trigger finger) is not usually considered neurological or musculoskeletal in nature it is relevant that in this case standard chiropractic care applied mainly at the spinal level appeared to facilitate a complete resolution of the patient’s trigger finger.

**Case Report:** A 2 ½ year old female was seen for her first chiropractic evaluation on June 22, 2012 presenting with stenosing tenosynovitis (trigger finger), unresponsive to prior care (e.g., medication, injections, and physical therapy) and hoping for an alternative to surgery.

**Methods:** Based upon the examination findings and previous treatment history, chiropractic adjustments using sacro occipital technique (SOT) protocols were directed to C4, T6, left scapula, left 1st rib head and left wrist.

**Results:** After seven chiropractic adjustments this 2 1/2 year-old child’s trigger finger was 80-90% resolved. At 6-month follow-up the mother indicated the child’s trigger finger had continued to improve following care and was completely resolved.

**Conclusion:** Because allopathic intervention for this condition appears to be have questionable outcomes and risks, chiropractic care may be a viable and safe initial step to take before exploring the more invasive and costly options.

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Introduction: The aim of this retrospective case study was to assess the effects of sacroiliac joint dysfunction (SIJD) in 8 Chilean athletes of the National Running Team in response to treatment via Sacro Occipital Technique (SOT) category II protocol during competition.

Methods/Intervention: Eight Caucasian athletes of the national running team of 4×100 meters (4 males and 4 females; age = 17 to 26 years old) were selected for this retrospective study and represented all the patients treated in this competition at this clinic. All patients were assessed with SOT protocol (posture, first rib, cervical compaction and arm fossa) to find sacroiliac dysfunction (SOT category II syndrome). As was routine in this clinic each athlete was then treated with SOT category II pelvic orthopedic blocking.

Results: All eight athletes presented with a SOT category II syndrome pre-competition which, post-race, all tested negative. The female athletes’ race times improved approximately 1:30 minutes and male athletes approximately 1:00 minutes.

Conclusion: This retrospective case series suggests a positive relationship between SOT category II syndrome protocol for SIJD in Chilean runner athletes. SOT treatment may have improved SIJ function leading to increased speed and faster race times. Further large comparative case control and/or clinical trials are warranted.

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Neuromuscular Dentistry

Shapira IL

Introduction: Neuromuscular Dentistry remains an enigma to many dentists who do not understand the purpose of electrodes, TENS (transcutaneous electrical nerve stimulation), computers and how this could improve the care of the temporomandibular joint (TMJ) disorders (TMD). This has led to confusion in the field of TMD care and with the term “Neuromuscular Dentistry.” There are several basic premises that underlie Neuromuscular Dentistry.

Stomatognathic Muscles: The first premise is that the stomatognathic muscles are the primary determinate of the mandible’s position during all jaw functions (when the teeth are not in occlusion) and that rest position is one of the most important positions in dentistry.

Occlusion: The second premise is that occlusion is important in neuromuscular dentistry as a resetting mechanism of the trigeminal nervous system’s control of the stomatognathic muscles.

Swallowing: During a healthy swallow the teeth will move freely without interference into full occlusion with bilateral equal contact and bilateral equal muscle activity and then return to rest position with low muscle tonicity.

Neuromuscular Occlusion: Neuromuscular occlusion (myocentric) occurs when centric occlusion (maximum non-torqued intercuspalation of teeth) is coincidental with a balanced muscle closure where the muscles will return to their relaxed state following closure.

Neuromuscular Dentistry and TMD: Neuromuscular dentistry considers many of the related disorders associated with TMD to be repetitive strain injuries.

Conclusion: Ultimately Neuromuscular Dentistry is about making accurate measurements and the use of those measurements to improve the doctor’s ability to make a differential diagnosis, tailor treatment to relieve pain, and create stable restorative dentistry with healthy relaxed musculature.

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Review of Cases using SOT/CMRT on Equine and Canine

Thompson JE

**Introduction:** This case study review (n=4) illustrates a possible relationship between the utilization of sacro occipital technique evaluation in the treatment of equines and canines.

**Case #1:** AB, a 12 year old Dutch Warm Blood (equine) began having shortness of breathe during work as a level 3 Dressage competitor.

**Case #2:** Rio, a 10-year old gelding quarter horse with known symptoms of anxiety and stress induced behavior changes (described by the owner as the appearance of “worry and/or unhappiness”) presented for chiropractic care. **Case #4:** Barnaby, a 12-year-old neutered male German Shepard mix with daily fecal incontinence presented for SOT evaluation.

**Methods and Intervention:** Equines and canines have seven occipital fibers relatively similar to humans. All cases were assessed with occipital fiber analysis (OFT) and treated with chiropractic manipulative reflex technique (CMRT).

**Results:** Following care significant improvement was noted in all cases from normalization of sinus and bowel function to reduced distress.

**Conclusion:** Based on a reduction in symptoms and the owner’s interpretation of the animal’s response before and after treatment there was reason to believe that some positive change had occurred. Due to these findings it is reasonable to assume that further investigation into the use of OFT and CMRT for equines, canines, and possibly other animals is warranted.

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