JOURNAL PUBLICATIONS
2009-2010 ACADEMIC YEAR to 2011-2012 ACADEMIC YEAR


\textit{Description:} Based upon the presentation of clinical features and management of a case, the authors describe that lumbar flexion/distraction may serve as a safe and effective component of conservative management of mechanical low back pain for some patients with spondylolysis and spondylolisthesis.


\textit{Description:} Based upon retrospective chart review of 226 nerve roots in 169 consecutive patients diagnosed with cervical or lumbar nerve root pain, the sensitivity (SE) and specificity (SP) for dermatomal pattern of pain are low with the exception of the C4 level (Se 0.60, Sp 0.72, n = 5) and the S1 level (Se 0.65, Sp 0.80, n = 37).


\textit{Description:} The article describes the treatment outcomes of 49 patients with lumbar radiculopathy secondary to disk herniation using a prospective observational cohort study design with follow-up. The follow-up period was on average 14.5 months. Using a diagnosis-based clinical decision rule, diagnostic and management algorithms were followed with clinically meaningful improvements in pain and disability occurring in 70% to 79% of the patients immediately post-treatment and at follow-up.


\textit{Description:} The article describes the treatment outcomes of 78 patients with pregnancy-related lumbopelvic pain (PRLP) using a prospective observational cohort study design. Using a diagnosis-based clinical decision rule, diagnostic and management algorithms were followed with clinically meaningful improvements in pain and disability occurring in 82% and 72% of the patients immediately post-treatment, respectively.

**Description:** This case report details the identification, and management of a female patient with the underdiagnosed clinical presentation of cervical angina. This patient responded favourably to cervicothoracic, and costotransverse joint manipulation. Anecdotally, this was the first case report published by chiropractors who delivered care to a patient within the United States Veterans Health Administration.


**Description:** Bone responds to the forces that are imposed upon it. This is commonly referred to as “Wolff’s Law.” While bone is a highly plastic tissue, responding to the environment by which it is surrounded, a great deal of the form and architecture of bone is genetically predetermined, and “Wolff’s Law” can only apply within reasonably strict limits. In this article, we demonstrate this through the study of the histology of multiple bones in human and other vertebrate skeletal material.


**Description:** There are two distinct healthcare systems in China, Western Medicine and Chinese Medicine. In addition to the Western/Mainstream Medicine, health care in North America (USA & Canada) also includes some form Alternative/Complementary Medicine, which includes Naturopathic Medicine, Chiropractic, Homeopath, Chinese Medicine and Ayurvedic Medicine, etc. The rapid development in modern science and technology has led to great change in public health awareness in North America. Going back to nature and seeking help from the nature has lately become the fashion. The present article intends to introduce the status of Alternative/Complementary Medicine in North American Healthcare system, analysis its characteristics, explore the reasons behind change and its future prospect.


**Description:** Based on reviewing literature and survey data, the authors used Health Believe Model (HBM) to analyze the social-psychological factor of Acupuncture Fever in the US. Authors also introduce some strategies to promote sustainable development of acupuncture in the US, including promote public perception of benefit, possibility of action and self-efficacy, increase influence to people with different classes, races and education received, as well as decrease public perception of barriers.

**Description:** Whiplash injury is a common condition in general acupuncture practice in the United States. By reviewing the Sinew Channel Theory from Nei Jing (The Inner Classic of the Yellow Emperor), analyzing the mechanism of whiplash injury and the nature of corresponding symptoms and signs, the authors categorized four common patterns of whiplash injury as Taiyang, Yangming, Shaoyang and Shaoyin. Recognizing these patterns will help practitioners to enhance their clinical therapeutic effects.


**Description:** Head repositioning tasks have been used in different experimental and clinical contexts but have yet to offer insight as to the task performance strategy. The purpose of this study was to explore the kinematics from a head aiming task that encompasses a Fitt’s task in neck pain patients and healthy control subjects. Decreased motor performance was observed in chronic neck pain patients during the most challenging cervical pointing task condition. These results may imply that in order for a performance based outcome measure to yield observable differences conditions that meet or exceed the optimum challenge point of the population tested should be employed.


**Description:** Presented in the framework of a case study, this is a multidisciplinary perspective on the management of spinal stenosis. The authors present the perspectives of: Geriatrician, Psychiatrist, Geriatric Nurse and Chiropractor.


**Description:** This article is designed to briefly address the history and regulatory impacts of recently adopted rules governing the manufacture of dietary supplements. Both the large scale manufacture of herbal products (and other supplements) and the compounding of individualized herbal formulations in small dispensary settings are covered by its regulations. Included in this article is the history of the regulation, a description of the concept of GMP or good manufacturing practice, an examination of what the Food and Drug Administration (FDA) regulates, and a brief discussion of the new regulation and how this impacts Oriental medicine practitioners.

**Description:** This article addresses issues regarding the recommendation and sale of prepared forms of Chinese medicines or “patent” medicines that are now available as dietary supplements. We will discuss several points that may be important to practitioners whose practice includes the dispensing or sale of dietary supplements. These are: the lack of a good conceptual fit between Chinese prepared medicines or “patents” and dietary supplements, the Food and Drug Administration provisions exempting retailers from the provisions of the Current Good Manufacturing Practice (CGMP), and the basis for and approach to practitioner “due diligence” with regard to sourcing CGMP compliant products. This article will not discuss compounding (preparing formulas from loose herbs or granules) in the office setting. This topic will be addressed in a later publication.


**Description:** This manuscript presents the results of a Delphi process for recommendations on best practices for the management of older adults. Practical recommendations are presented for both the practicing chiropractor, but also for the educator teaching in a geriatric class.


**Description:** It has been a slow progress for the theory combination of Western medicine and Chinese medicine in the past 50 years in China. The reason, according to our many years of research and study, is that the way of thinking may be out of the right track. The connotation of TCM Patterns-Zheng has its own dynamic change law or a rule that is definitely cannot be explained by ordinary thought or methods. This paper discussed the appropriate scientific approach and method to re-explore the biomedical Pathophysiological substances for spleen Qi deficiency that has been studied for many years by the team.

Description: Currently the study of TCM Zheng-Pattern is limited to one Zheng and many biomedicine indexes, which is not consistent with the nature of TCM Zheng-Pattern. We have studied the Zheng-pattern for many years with the support of National Natural Sciences Foundation and National Science Committee in China. We have published 42 papers (including three books), concluded that Zheng-Pattern itself is an imbalance state model in the inner environment of the human body after it gets sick. Zheng-Pattern is not fixed; it is in a constant changing status. Therefore, to study the TCM Zheng-pattern by modern medicine holistic dynamic approach is the shortcut.


Description: The female advantage in fatigue resistance may impact strength development. The study addressed strength recovery patterns as a function of gender and training background with implications for designing exercise training programs to optimize strength development in males and females.


Description: The clinical features of a case with exercise-induced lower extremity numbness and weakness as well as cauda equina symptoms in a patient with infrarenal inferior vena cava (IVC) agenesis and a review of literature are discussed.


Description: Acupuncture is frequently used to manage the side effects associated with cancer therapy. In acupuncture practice, the presence of thrombocytopenia is a relative contraindication to acupuncture use among patients with cancer. However, the safety of acupuncture in patients with cancer treatment-related thrombocytopenia has not been previously investigated. This retrospective case series provides descriptive data on the safety of acupuncture in patients with cancer with and without thrombocytopenia.

**Description:** Channel Pattern Differentiation has played a leading role in acupuncture practice since the time of Nei Jing (The Inner Classic of the Yellow Emperor). For the past several decades, however, the clinical application of channel pattern differentiation has begun to diminish; there is even a trend that it will be replaced by Zang- Fu (Organ) pattern differentiation. The authors elaborate the importance of channel pattern differentiation by analyzing its theory from Nei Jing (The Inner Classic of the Yellow Emperor) and by summing up the methods, clinical significance and applications of the basic diagnostic tools— inquiry, observation, palpation, and measurement of imbalance using modern instruments (electrical, thermal, etc.) on channels and points.


**Description:** Lyme disease is caused by an invasive spirochetal bacterium. Generally, the patients in chronic stage do not respond well to long-term antibiotic treatment, and also likely suffer from severe side effects of the drug. Clinical research shows by using special Chinese herbs and acupuncture points would improve various symptoms of Lyme disease, especially in its chronic stages. This new approach is seen to be safe, effective and economical, especially for the chronic stage of Lyme disease.


**Description:** The commentary discusses the role of chiropractic physician in recognizing the patient who may be having vertebral artery dissection and stroke (VADS). The author presents the best current literature refuting the casual relationship between cervical manipulative therapy (CMT) and VADS. The author encourages the chiropractic profession to embrace the idea of a public health campaign to educate the public about the warning signs and symptoms of VADS, an uncommon but potentially devastating disorder.


**Description:** This article provides a retrospective case report and imaging of a patient who sustained a fracture of the lateral talar processes while wakeboarding along with a review of the etiology, diagnosis, and treatment of snowboarder’s fractures.

**Description:** Muscle thickness is a widely used parameter for quantifying muscle function in ultrasound imaging. However, current measurement techniques generally rely on manual digitization, which is subjective, time consuming, and prone to error. The primary purposes of this study were to develop an automated muscle boundary tracking algorithm to overcome these limitations and to report its intra-examiner reliability on pectoralis major muscle. Results demonstrated excellent intra-examiner reliability of the sonomyographic measurements.


**Description:** The article examines the cellular and molecular changes that occur in vertebral segments under chronic overload. The study incorporates in a mouse tail model the use of MRI to longitudinally assess both wild type and immune compromised genetically modified mice. This approach enables the investigators to look at the role of specific molecular pathways and their role in the development of degenerative changes in the spine, including the development of bone marrow edema. Using chronic compression the progression of degenerative changes due to external overloading of the spine is assessed. Micro-CT and histological investigation post-mortem help to paint a complete picture of the degenerative process. Translational research such as this helps to inform clinicians as to the true nature of the physiology that manifests in advanced imaging techniques.


**Description:** The objective of this study was to determine if active cervical range of motion (ROM) and Fitts’ task movement time differences occurred after high-velocity low-amplitude cervical spine manipulation (SM) across various indexes of difficulty. A linear relationship between indexes of difficulty and movement time as predicted by Fitt’s law was observed. Significant group effects indicate that SM not only increases cervical active ROM but also facilitates that performance of a cervical spine Fitts’ task requiring rotation. This task may be used to quantify motor performance in clinically symptomatic populations with reduced ROM who are appropriate candidates for SM.

**Description:** This workshop and group development process offers to act a template for other university-based working groups. There are vast resources and opportunities within the publicly funded education system as evidenced by the chiropractic professions in other countries. This manuscript also offers to inform other chiropractors presently operating in isolation (as clinicians, scientists, clinician scientists or clinician scientists in training) within other publicly funded universities of the practical application of group formation and interdepartmental collaboration.


**Description:** The report describes the process, participation, and recommendations of a set of consensus conferences on strategy for professional growth within five key domains. The five domains were education, research, regulation, workplace, and leadership. The overall goal was further development of public trust, better alignment between the chiropractic profession and its stakeholder and strengthening chiropractic’s role in health care.


**Description:** Homeopathy is a relatively independent therapeutic system that is very popular in Europe and the United States. Although homeopathic medicine and Chinese medicine belongs to two different medical systems stemmed from two distinct cultural backgrounds, they do share similar philosophies, holistic treatment principles, and more importantly diagnostic approaches. This study focuses on homeopathic diagnosis and discusses its diagnostic strategies, laws and clinic practice characteristics. Through the comparison of homeopathic and Chinese medicine diagnosis to learn the essence of homeopathic diagnosis, enrich Chinese medicine diagnostic theory and improve its quality of diagnosis and treatment.

**Description:** Palpation is a common diagnostic method in Chinese medicine. By examining the current status and features of various palpations in different acupuncture schools in the United States, the authors concluded that the palpation feedback examination is not only the manifestation of people oriented individualized treatment both physically and psychologically in America, but also a kind of inheritance and development of diagnosis and treatment in the modernization of TCM.


**Description:** The multi-cultural character of the Unite States supports a variety of acupuncture styles. This article traces the background and analyzes the current developmental stage of 3 acupuncture styles: Five Element Constitutional Acupuncture; Japanese Kiiko Acupuncture; American trigger point Acupuncture by comparing the similarities and differences of diagnostic methods, pattern differentiation, and treatment.


**Description:** The research describes changes in weight status and lipid profiles following a 28-day diet intervention program. The 28-day diet intervention program consisted of a cleansing day—fasting with a “cleansing” weight loss tea—and 6 restricted diet days per week. On the cleansing days, subjects drank 4 oz of cleansing tea 4 times per day (40 cal per servings). Food was restricted to 1 egg or 1/4 cup of almonds and only if necessary to relieve hunger. On the restricted diet days, subjects drank 2 high-protein shakes as replacements for 2 meals (200 cal per shake). The third meal was a 400- to 600-cal low–glycemic index meal from a set food list (e.g., 4 oz of lean protein, chicken, or fish; 1 to 2 cups of fresh vegetables; no refined carbohydrates such as bread or pasta) with an emphasis on organic foods. Subjects were instructed to drink at least 64 oz of water, preferably filtered or spring water.

**Description:** The report describes the development of a reliable and valid survey instrument (MEDRISK) to measure patient satisfaction with chiropractic care. The ability to capture various aspects of patient care that impact patient satisfaction is of great importance with respect to marketing, reimbursement, and treatment effectiveness. Thus, the development of survey instrument that is both practical to administrate in a patient care setting with adequate psychometric properties to capture important aspects of the clinical encounter is a critical step towards understanding effective practice characteristics of chiropractic care in the real-world setting.


**Description:** The meridian system is considered as basic anatomy for acupuncture. Meridian-related pattern differentiation is one of the basic diagnosis methods in Traditional Chinese Medicine. The authors survey how this doctrine was weakened during the past century, especially in acupuncture education for foreigners, how it is currently being reinvigorated, and give examples of some conditions that can be effectively treated based on this doctrine.


**Description:** Whiplash injury is a common condition in acupuncture practice in the United States. Based on analyzing the mechanism, clinical features of whiplash injuries from both of biomedicine and traditional Chinese medicine perspective, authors claimed the approach of pattern differentiation which including the consideration of the location and stage of injury is seen to be effective for Whiplash injury. Considering the location of the injury, it can be classified as Taiyang, Yangming, Shaoyang and Shaoyin patterns. Considering the stage of the injury, Qi Stagnation and Blood Stasis patterns are classified in the acute stage and Phlegm Accumulation, Insufficiency of the Liver and kidney and Qi & Blood Deficiencies patterns classified during the chronic stage.


**Description:** This short article articulates that need to consider the psychosocial aspects in the management of chronic lower back pain.

**Description:** This case series presents data collected in a small sample of older adults living in a long-term care center. This is an important step in documenting the safety of the use of spinal manipulative therapy in older adults. While there is a need for larger and more rigorous study on this topic, the data are encouraging that the use of spinal manipulation in older adults, even those with osteoporosis, may be safe.


**Description:** The research reported reductions in pain severity and disability following chiropractic management of neck pain among veterans seeking care within a VA medical facility.


**Description:** The research reported reductions in pain severity and disability following chiropractic management of low back pain among veterans seeking care within a VA medical facility.


**Description:** The research describes the prevalence of posttraumatic stress disorder (PTSD) among veterans seeking chiropractic care for neck pain and low back pain within a VA medical facility. The research addresses the interrelationships between PTSD and chronic pain and the impact of PTSD on the evaluation and management of musculoskeletal pain.


**Description:** This ACC RAC 2011 award winning paper aims to develop a rate-controlled Mechano-Acoustic Indentor System and a corresponding finite element optimization method to extract nonlinear elastic parameters of soft tissue and evaluate its test-retest reliability. Results showed that the technology has excellent between-trials repeatability and test-retest reliability with potential to quantify the effects of a wide variety of manual therapy techniques on the soft tissue elastic properties.

*Description:* The report discusses the presentation of symptoms, differential diagnosis, manual therapy and exercise treatment plans and successful treatment outcomes of four patients with idiopathic ear pain referred for chiropractic care.


*Description:* The research applied a previously developed diagnosis-based clinical decision guide (DBCDG) to patients seeking care for low back pain in a busy private practice environment. Diagnostic and management algorithms are presented. The prevalence of responses on three questions of diagnosis to rule out visceral or serious disease, identify the source of pain, and identify perpetuating factors are reported and interpreted. The research addressed feasibility of using DBCDG to distinguish subsets of patients with low back pain that may guide treatment decisions and the role of “real world” practice based research as a tool for conducting comparative effectiveness research.


*Description:* The research applied a previously developed diagnosis-based clinical decision guide (DBCDG) to patients seeking care for neck pain in a busy private practice environment. Diagnostic and management algorithms are presented. The prevalence of responses on three questions of diagnosis to rule out visceral or serious disease, identify the source of pain, and identify perpetuating factors are reported and interpreted. The research addressed feasibility of using DBCDG to identify specific diagnostic characteristics in patients with neck pain that may guide treatment decisions and the role of “real world” practice based research as a tool for conducting comparative effectiveness research.


*Description:* A better understanding of neck pain and low back pain may come from the application of the biopsychosocial model to spinal pain as compared to biomedical model. Associations among psychologic factors were evident among patients with neck pain and low back pain. Within a busy a private practice environment, using practical screening instruments of key psychological factors is feasible. Screening for key psychological factors may provide relevant clinical information in patients with neck pain and low back pain.

**Description:** The commentary addresses the need, the necessary skill set, potential benefits for the patient, society and the health care system, and barriers related to the establishment of the primary spine care practitioner.


**Description:** Investigates the reliability of the flatbed scanning technology. Images of the plantar surface of the foot recorded with an Associate Platinum digital foot scanner measuring the Staheli Index, Chippaux-Smirak Index, Arch Angle, and Arch index. ICC values were calculated to evaluate intra-rater, inter-day, and inter-clinician reliability. Scanning technology provides a reliable measure of footprint indices, as demonstrated by high ICC values.


**Description:** Investigates the relationship between chronic compression and TNF signaling in compression induced BME utilizing a tail vertebrae compression model with WT, TNF-Tg and TNFR1&2/- mice to evaluate: 1) healing following release of chronic compression, 2) induction of BME in the absence of TNFR, and 3) efficacy of anti-TNF therapy. Data demonstrates a critical role for TNF in the induction of chronic compression-induced BME, but not in its maintenance. Amelioration of BME is achieved through biomechanical stability, but is not affected by anti-TNF therapy.


**Description:** The research described increases in activation patterns of core muscle groups while subjects were performing common abdominal exercises with an abdominal training device.

Description: The research described changes in the neuromuscular control of balance among individuals with musculoskeletal disorders of the lower back, hip, knee, ankle and/or foot as function of footwear conditions being more or less comfortable. The potential neuromuscular benefits of custom-molded foot orthotics were discussed within the context of sensorimotor mechanisms regulating balance control.


Description: The research provided methodological insights on using a sustained incremental exercise protocol to document improvements in movement economy with an orthotic intervention. The role of footwear comfort perception within the theoretical framework of the neuromuscular benefits of orthotics was addressed.


Description: This commentary by experts in the field of geriatrics, discusses the evidence for the use of spinal manipulative therapy, acupuncture, nutritional counseling and fall prevention strategies as delivered by doctors of chiropractic. The overview article written by providers including chiropractors and a geriatrician provides the practicing chiropractor with practical, evidence based information.


Description: This review provides information about the risks for - and potential presentation of - MRSA infection in manual therapy practices. MRSA epidemiology is provided as is information about control and prevention in manual therapy settings, including in athletics. Information about MRSA skin and soft tissue infection recognition for manual therapists is reviewed. A MRSA reference guide for patients is included.

**Description:** This study aims at using a custom-developed mechano-acoustic indentor system to quantify the immediate effect of Nimmo technique on muscle elasticity, pain perception, and disability and evaluate the comparative effectiveness of treating all primary and secondary trigger points (TrPs) vs primary TrP only. Our results demonstrated that immediate effect of a single full Nimmo treatment appears to reduce muscle tone, subjective pain, and disability and be more beneficial than focal TrP treatment.


**Description:** We examined the correlation between subjective questionnaire based pain measures for lumbar spinal stenosis, and ambulation performance measures derived from accelerometry for a seven-day period. Questionnaires used were the Oswestry Disability Index, Roland-Morris Disability Questionnaire, and Disabilities of the Arm, Shoulder, and Hand, and health 36-Item Short Form Health Survey (SF-36). The best correlation to physical activity and ambulation was found using the physical function subscale of the SF-36. In general questionnaire based pain measures do not capture the real-life movement performance of individuals with lumbar spinal stenosis.

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