Chiropractic Research in Review

The following abstracts come from two sources: the *Journal of Manipulative and Physiological Therapeutics* (published nine times annually) and the *Journal of Chiropractic Medicine* (published quarterly).

Abstracts are reprinted with permission. The National University of Health Sciences, owner of the journals, upholds their compliance with the highest publication standards, which expressly support editorial freedom and best publication practices. Access complete abstracts from each issue of *JMPT* and *ICM* online. For background information on National’s three peer-reviewed journals (*Journal of Chiropractic Humanities* is the third), read “The Importance of Our Chiropractic Journals” in the Aug. 26, 2012 issue of *DC*.

Could Communication Training Improve Your Clinical Outcomes?

**Objective:** The aim of this systematic review was to investigate the literature on the effectiveness of communication skills training for clinicians on patients’ clinical outcomes in primary care and rehabilitation settings.

**Methods:** We systematically reviewed the literature for randomized controlled trials investigating the effectiveness of communication skills training for clinicians on patients’ satisfaction with care and on pain and disability in primary care and rehabilitation settings. The search strategy was conducted using AMED, PsycINFO, MEDLINE, CINAHL, EMBASE, PEDro, and Cochrane Central Register of Controlled Trials through June 2015. Methodological quality of included trials was assessed by two independent investigators using the PEDro scale, and consensus was used to resolve disagreements. Data were extracted, and meta-analyses were performed.

**Results:** Nineteen randomized controlled trials were included. Of these, 16 investigated communication training for clinicians that emphasized patient participation (e.g., shared decision-making approaches). Communication training had small effects on patients’ satisfaction with care when compared to control (4.1 points on a 100-point scale, 95% confidence interval [CI], 1.1-7.0). Communication training also had small effects on pain and disability with pooled results showing weighted mean differences of -3.8 points (95% CI, -6.5 to -1.1) and -3.6 (95% CI, -5.4 to -1.7), respectively.
**Conclusions:** Studies show that communication training for clinicians produces small effects in improving patients’ satisfaction with care or reducing pain and disability in primary care and rehabilitation settings.


---

**Kinesiology Taping: Short-Term Effects on Hallux Valgus**

**Objective:** The main aim of this study was to measure short-term effects of kinesiotaping on pain and joint alignment in the conservative treatment of hallux valgus.

**Method:** Twenty-one female patients diagnosed with a total of 34 feet with hallux valgus (13 bilateral, six right, and two left) participated in this study. Kinesiotaping was implemented after the first assessment and renewed in days 3, 7, and 10. The main outcome measures were pain, as assessed using visual analog scale, and hallux adduction angle, as measured by goniometry. Secondary outcome measure was patients’ functional status, as measured by Foot Function Index and the hallux valgus scale of the American Orthopaedic Foot and Ankle Society (AOFAS). The radiographic results were also measured before and after one month of treatment. The Wilcoxon test was used to compare the differences between initial and final scores of AOFAS, as well as FFI scales and hallux valgus angle assessment scores.

**Results:** There was a significant reduction in goniometric measurement of hallux valgus angle (*P* = .001). There was a significant reduction in pain intensity (*P* = .001) and AOFAS and Foot Function Index scores at the end of the treatment (*P* = .001 and *P* = .001, respectively). There was a significant difference between radiographic results in one-month control (*P* = .009).

**Conclusions:** For this group of female patients, pain and joint alignment were improved after a 10-day kinesiotape implementation in patients with hallux valgus. The findings showed short-term decreased pain and disability in hallux valgus deformity.


---

**Deep-Vein Thrombosis Presenting as Low Back Pain**
**Objective:** The purpose of this case report is to describe a patient who presented with acute musculoskeletal symptoms, but was later diagnosed with multiple deep vein thrombosis (DVT).

**Clinical Features:** An 18-year-old female presented to a chiropractic clinic with left lumbosacral pain with referral into the posterior left thigh. A provisional diagnosis was made of acute myofascial syndrome of the left piriformis and gluteus medius muscles. The patient received three chiropractic treatments over one week, resulting in 80% improvement in pain intensity. Two days later, a sudden onset of severe abdominal pain caused the patient to seek urgent medical attention. A diagnostic ultrasound of the abdomen and pelvis were performed and interpreted as normal. Following this, the patient reported increased pain in her left leg. Evaluation revealed edema of the left calf and decreased left lower limb sensation. A venous Doppler ultrasound was ordered.

**Intervention and Outcomes:** Doppler ultrasound revealed reduction of the venous flow in the femoral vein area. An additional ultrasonography evaluation revealed an extensive DVTs affecting the left femoral vein and iliac axis extending towards the vena cava. Upon follow-up with a hematologist, the potential diagnosis of May-Thurner syndrome was considered based on the absence of blood dyscrasias and sustained anatomical changes found in the left common iliac vein at its junction with the right common iliac artery. A week following discharge, she presented with chest pain and was diagnosed with venous thromboembolism. The patient was successfully treated with anticoagulation therapy and insertion of a vena cava filter.

**Conclusion:** Although DVTs are common in the general population, presence in low-risk individuals may be overlooked. In the presence of subtle initial clinical signs such as those described in this case report, clinicians should keep a high index of suspicion for a DVT. Rapid identification of such clinical signs in association with a lack of objective examination findings warrants further evaluation due to potentially negative outcomes.


---

**Myofascial Trigger Points in Patients With Spinal Pain**

**Objective:** A systematic review was performed to evaluate the existing evidence related to the prevalence, incidence, localization, and pathophysiology of myofascial trigger points (MTrPs) in patients with spinal (back and neck) pain.
Methods: A systematic review following Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines was performed in two electronic databases (PubMed and Web of Science) using predefined keywords regarding MTrPs and spinal pain. A “PICOS” questionnaire was used to set up the search strategies and inclusion criteria. Full-text reports concerning MTrPs in patients with back or neck pain, which described their prevalence, incidence, location, or underlying physiopathology were included and screened for methodological quality by three independent researchers. Each study was assessed for risk of bias using a checklist derived from the Web site of the Dutch Cochrane Centre.

Results: Fourteen articles were retrieved for quality assessment and data extraction. Studies reporting the incidence of MTrPs in patients with spinal pain were lacking. Within spinal pain, patients with neck pain were found to have the highest prevalence rates of MTrPs. The trapezius descendens, levator scapulae, and suboccipitales muscles were the most prevalent locations for active MTrPs in patients with neck pain. Latent MTrPs were present in asymptomatic people, but no significant differences were found in the prevalence rate of latent MTrPs between patients with spinal (neck) pain and healthy controls. The only study investigating prevalence of MTrPs in different localizations of the same muscle reported no significant differences in prevalence between active and latent MTrPs within the trapezius descendens muscle. Studies examining pathophysiological mechanisms underlying MTrPs demonstrated an acidic environment, high concentration of algogenic/inflammatory substances, stiffer muscle tissue, retrograde diastolic blood flows, spontaneous muscle activity at rest, and loss of muscle contractibility in muscles with MTrPs. Altered central processing was also found to play a role in the development of MTrPs.

Conclusions: Myofascial trigger points are a prevalent clinical entity, especially in patients with neck pain. Evidence was not found to support or deny the role of MTrPs in other spinal pain. Compelling evidence supports local mechanisms underlying MTrPs. Future research should unravel the relevance of central mechanisms and investigate the incidence of MTrPs in patients with spinal pain.


Common Lab Tests Ordered by a Sports DC for Elite Athletes

Objective: The purpose of this study is to describe and discuss laboratory tests ordered on elite athletes in an interdisciplinary sports medicine clinic by a doctor of chiropractic over one calendar year.
Methods: A retrospective review of laboratory tests ordered during routine clinical practice as standard screening and diagnostic tests from November 1, 2009, to November 1, 2010 was performed. Data were collected during clinical encounters at one sports medicine clinic and entered into a database for analysis. Descriptive and frequency statistics were used to describe the tests ordered and the frequency of abnormal findings.

Results: Five hundred and thirty-nine studies were ordered for diagnostic and routine screenings on 137 athlete patients (86 males, 51 females), representing 49 types of tests. Sample sources included blood, urine, skin lesions, and fecal matter. The most commonly ordered tests were complete blood count, comprehensive metabolic panel, serum ferritin, creatine kinase, serum iron and total iron binding capacity, total cortisol, thyroid stimulating hormone, and lipid panels. There were 217 studies (40%) flagged as abnormal by the reporting laboratory.

Conclusion: This report provides greater insight into the diverse array of laboratory studies ordered over a one-year period for diagnosis and screening of elite athletes. A high percentage of the results were flagged as abnormal by the laboratory. These findings show that the unique physiology of the elite athlete must be considered when interpreting laboratory findings in this population.


Page printed from: