

The Chiropractic Report

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Report on Rio Congress

New Research and Advances in the Profession

A. Introduction

IN THE BIGGEST EVENT IN THE history of chiropractic in Latin America, over 900 delegates attended the 11th Biennial Congress of the World Federation of Chiropractic (WFC), hosted by the Brazilian Chiropractors' Association (ABQ) and held in Rio de Janeiro, April 3-9, 2011.

Half the attendees were chiropractors and students from the host country of Brazil, which now has over 600 chiropractors and nearly 700 students enrolled in Brazil's two university-based chiropractic programs. These universities, which were co-sponsors of the Congress, are Feevale University in Novo Hamburgo and the Anhembi Morumbi University (UAM) in Sao Paulo.

"Congratulations for the fantastic Congress", wrote Dr. Robert Gevers of Spain, praising all aspects of the program. "Thank you for an inspiring Congress" wrote Dr. Tobias Lauritsen, President, Swedish Chiropractic Association and "I had a truly unforgettable experience", says Canadian student Fabio Levi in his email.

The members of the WFC are national associations of chiropractors in 89 countries. The WFC works closely with two other international chiropractic organizations which held their annual meetings at the congress also - the Fédération Internationale de Chiropratique du Sport (FICS) representing sports chiropractors and the World Congress of Chiropractic Students representing students and their leaders. Student delegations from 27 colleges/universities in 12 countries were in Rio. Features of the Rio meetings that will be of interest to all doctors of chiropractic include:

- The latest and best research internationally – including the first random-

ized controlled trial of chiropractic management of patients with chest pain referred by their primary care doctors to a hospital cardiology department.

- A forum on whether or not there should be use of prescription medications in chiropractic practice.
- Significant advances in sports chiropractic.

This issue of the Report reviews highlights of Congress week in a country where chiropractic is developing rapidly. Ten years ago there were few chiropractors in Brazil but two new university-based education programs. With the graduation of chiropractic students currently enrolled in these programs there will be more than a thousand chiropractors in the country. At the Congress two of the four main research prizes went to Brazilian researchers, and national leaders in sports medicine and orthopedics spoke of the important role of the chiropractic profession in Brazil – a country with a population of 190 million and increasing prominence and weight in the world.

B. WFC Assembly

2. The 2-day WFC Assembly of Members was held April 4-5 before the main academic and social programs. The first day featured:

- Short reports from leaders representing over 40 national associations worldwide on major achievements and challenges for the profession in their countries since the last WFC Assembly two years ago. For example Dr. Philippe Fleuriau, President of the French Association of Chiropractors, reported on details of new law this year to recognize and regulate chiropractic in France.

Dr. Raul Guíñez of the Chilean Chiropractic Association spoke of Chile's first chiropractic program which has started this year at Central University in Santia-



Mr. Bernard Rajzman, former Brazilian Minister of Sport and President of the Athletes Commission, Brazilian Olympic Committee, and a samba band opened the WFC's 11th Biennial Congress in Rio de Janeiro.



go. In Denmark first chiropractors have commenced a new 5-year postgraduate course that will qualify them to hold specialized hospital appointments in hospital spine care departments.

- Special reports from FICS, the WCCS and other chiropractic organizations and institutions. For example the International Board of Chiropractic Examiners (IBCE), which has an international advisory committee and the benefit of funding and expertise from the US National Board of Chiropractic Examiners, is delivering licensing examinations in countries such as Cyprus (in Greek), Spain (Spanish), Thailand (Thai) and most recently Japan (Japanese).

3. On the second day over a hundred student leaders from the WCCS joined the WFC delegates for 2 major events:

- A lecture titled *The Future of Spine Care and Who Will Deliver It* by American neurologist and chiropractor Dr. Scott Haldeman, Chair of the WFC Research Council. This was the keynote lecture of the Assembly, named the John A. Sweaney Lecture after Dr. John Sweaney of Australia, a former WFC president who was present.

Dr. Haldeman, widely accepted as a foremost authority on spinal problems, spoke of the continuing history of poor management of spinal problems within healthcare systems, the centrality of the spine to the chiropractic profession, the opportunity and need for some professional group to become the non-surgical spine care specialists in primary care, and his view that the chiropractic profession should make appropriate plans now to take that opportunity and

fulfill that need. He gave an example of how that was being done in World Spine Care (www.worldspinecare.org), a comprehensive plan for spine care services in developing countries in which he and other doctors of chiropractic have leadership roles.

- A discussion forum titled *Should There Be Use of Medication in Chiropractic?* The WFC has clear policy against the use of medication (see www.wfc.org/Aboutwfc/Policies) and there was no proposal before the Assembly to change that. However this is clearly a controversial subject with divided opinion in the profession. A 2003 survey of North American chiropractors by McDonald Durkin et al.¹ reported that almost one in two chiropractors (48.8%) thought that chiropractors should have prescription rights for musculoskeletal medicines, but recent moves for such rights in New Mexico and other US states have been opposed by both the American Chiropractic Association and the International Chiropractors' Association. A recent survey by the British Chiropractic Association (BCA) in the UK reports that 83% of BCA members support a move to limited prescription rights, and such rights are being pursued in Switzerland and Denmark.

A core purpose of the WFC is to provide an international forum for effective discussion of major issues such as this, and the Rio Forum featured five speakers selected from different world regions who were known to speak powerfully on both sides of the issue, followed by a 90 minute open discussion. "This was the best discussion of a

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deeply controversial subject I have ever heard in the profession", said Dr. Scott Haldeman, "and all speakers for or against made superb presentations". Speakers in favor of limited prescription rights in chiropractic practice

Dr. Scott Haldeman delivers his John A. Sweaney Lecture.





Opening Session speakers answer questions (from left): Dr. Greg Kawchuk, Dr. Scott Haldeman, Dr. Wagner Castropil and Dr. Philip Santiago.

were Dr. Gian Joerger, President of the Association of Swiss Chiropractors, Dr. Richard Brown, President, British Chiropractic Association and Dr. Charmaine Korpmaal, Vice-President, Chiropractors' Association of South Africa and Program Leader, School of Chiropractic, Durban University of Technology. None of them proposed a significant amendment to undergraduate chiropractic education which, they agreed, should maintain the traditional fundamentals of the chiropractic profession as a conservative and holistic approach to healthcare, offering patients an alternative to use of medication and surgery and having principal reliance upon skilled manual treatments.

However they argued that one of the choices for chiropractic postgraduate education for chiropractors wanting to have extended practice rights should be courses leading to a qualification that allowed them to prescribe musculoskeletal medicines. Evidence-based and patient-centered practice required the profession to provide these expanded practice rights – in the best interest of both patients and the profession.



Dr. Gerard Clum (left) and Dr. Richard Brown speaking at the Forum on Use of Medication.



Speakers opposed to this were Dr. Dennis Richards, Past-President, Chiropractors' Association of Australia and Dr. Gerard Clum, Past-President, Life College of Chiropractic West in Haywood, California, USA. They reflected upon the fundamental principles, identity and role of the chiropractic profession as a conservative and holistic profession, relying upon the natural healing powers of the body. If those principles were compromised the profession would have a very uncertain future as a distinct profession. They cited the example of osteopathy in the US, which moved to accept prescription rights then specialties in surgery from the 1960s and was now effec-

tively indistinguishable from the medical profession in education and practice in the US.

C. Main Congress Program

4. Sports Chiropractic. Brazilians are passionate about sports and in 2014 they host FIFA's football World Cup, in 2016 the Summer Olympic Games. For these and other reasons, and at the request of the host Brazilian Chiropractors' Association, the main theme of the Congress was sports chiropractic.

The Congress was opened by Bernard Rajzman, a former volleyball star, Olympian and Minister of Sport who currently serves as President of the Athletes Commission for the Brazilian Olympic Committee. He spoke of his respect for the role of chiropractic with athletes. The first session then featured lecturers by:

- Dr. Philip Santiago of New Jersey, reviewing the participation of doctors of chiropractic in sports medicine teams at the Olympics since the 1980s. Dr. Santiago has held positions with the US Olympic Committee since he was a team doctor at the Barcelona Summer Olympics in 1992.
- Dr. Wagner Castropil who represented Brazil in judo at the Barcelona Olympics. Dr. Castropil, a prominent Sao Paulo orthopedic surgeon is Medical Director for the Brazilian Judo Federation. He spoke of the good results his athletes and he himself had experienced with chiropractic treatment.
- Dr. Scott Haldeman and Dr. Greg Kawchuk respectively on the neurological and biomechanical effects of spinal manipulation – there is now much basic science evidence of the mechanisms involved.

The second half of the morning featured a sports chiropractic grand rounds panel discussing specific case scenarios, but the highlight was the appearance during the session of one of Brazil's national sports heroes – Carlos Alberto Torres who, playing with Pele, was captain of the 1970 Brazilian football team that won the World Cup.

Mr. Torres told how he was on crutches suffering from disabling back pain 18 months ago. No treatments were helping. Finally he was given the telephone number of a type of



Carlos Alberto Torres speaks and, accompanied by his chiropractor Dr. Dallegrave (below right), receives an award from Dr. Sheila Wilson FICS President, Dr. Mike Flynn WFC President and Dr. Eduardo Bracher Past-President Brazilian Chiropractors' Association.

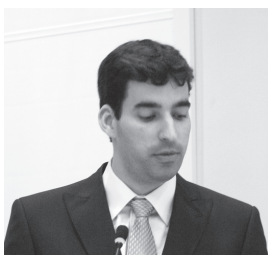


professional he had never heard of previously, a chiropractor or, in Brazil's language of Portuguese, a quiropraxia. He experienced a rapid and full recovery under chiropractic care and has remained pain free and well since with continuing care. Mr. Torres then called forward Dr. Elisa Dallegrave of Rio de Janeiro, his chiropractor, who joined him as he received an award of appreciation from the Congress.

5. In a related meeting the previous day the Fédération Internationale de Chiropratique du Sport (FICS) held its 2011 Assembly and Scientific Symposium sponsored by Logan College of Chiropractic. Dr. Gordon Lawson of Canada reported on lessons learned from the successful integration of sports chiropractic services in the host medical services team for the Vancouver Winter Olympics last year, Dr. Saul Luengas of Mexico reported on plans for chiropractic services at the Pan American Games in Guadalajara, Mexico in October this year, and Dr. Tom Greenway of the UK reported on ongoing plans to integrate chiropractic services at the London Summer Olympics next year.

The scientific symposium included presentation of 8 studies representing best new sports chiropractic research from around the world as shown in Table 1. The paper by Marcelo Botelho DC and Bruno Andrade MD reported a pilot randomized controlled trial of the effects of chiropractic cervical manipulation on grip strength in elite judo athletes or judokas. This paper was subsequently presented at the main congress, winning the prize for the best new original research from private practice. It will therefore be published in the *Journal of Manipulative and Physiological Therapeutics* (JMPT) later this year.

Botelho, who is a graduate of the chiropractic program at the University Anhembi Morumbi in Sao Paulo and was a member of the sports medicine team for the Brazilian National



Dr. Marcelo Botelho of Brazil (left) and Dr. Jay Greenstein of the US present their research to the FICS Symposium.



Team at the Pan American Games in Rio de Janeiro in 2007, explained that for elite athletes in professional sports there is continual demand for treatments that improve performance. Joint manipulation to improve spinal function is increasingly used by athletes but needs further research, and the objective of his pilot trial was to evaluate the effect of cervical manipulative vertebral therapy on grip force for elite judokas. Previous studies had shown increased quadriceps strength, altered neuromuscular reflexes and inhibition of lumbar and cervical motor neurons following joint manipulation. In his trial:

- Subjects were 18 female and male judo athletes competing at a national level in Brazil who were aged 15-30 years and had no previous experience with chiropractic treatment. The 9 subjects randomly assigned to the treatment group received 3 treatments from an experienced chiropractor during a 3-week period, with a minimum interval of 36 hours between treatments. The 9 subjects in the control group received a sham treatment involving mobilization only at the same frequency.
- Treatments were given at the level of greatest biomechanical restriction – most frequently in the upper cervical spine at C1-2 (49%) or the cervicothoracic junction between C5- T1 (43%). Interventions were timed for the afternoon prior to training.
- The groups proved to be well matched with respect to demographic and clinical factors (e.g. age, gender, competition level, knowledge of chiropractic, pain level, number of previous pain episodes).
- Grip strength was measured immediately prior to each intervention and 20 seconds afterwards. Results were that there was significant increase in grip strength for those in the treat-

Table 1. FICS Symposium – Sports Chiropractic Research

Chiropractic Utilization at the 2009 World Masters Games
—Henry Pollard, Peter Garbutt, *Australia*

A Report of the 2009 World Games Injury Surveillance of Individuals who Voluntary used the FICS Delegation
—Deborah Nook, Brian Nook, *Australia*

Relationships between Injury and Success in Elite Tae Kwon Do Athletes
—Mohsen Kazemi, *Canada*

Effects of Cervical Manipulative Vertebral Therapy on Judo Athletes Grip Strength
—Marcelo Botelho, Bruno Bezerril Andrade, *Brazil*

The Effects of a Closed-Chain, Eccentric Training Program on Hamstring Injuries of a Professional Football Cheerleading Team
—Jay Greenstein, Bart Bishop, Robert Topp, *USA*

A Pilot Study of Force Generation at the Achilles Tendon in 0°, 30°, 60° and 90° of Knee Flexion
—Laney Nelson, Brian McGaughan, Kristina Berry, Roger Tepe, *USA*

OTZ Tension Adjustment for Frozen Shoulder Syndrome: A Retrospective Case Series of 50 Patients
—Michael Hall, Francis Murphy, Anne Jensen, *USA*

The Effect of Spinal Manipulation on the Neuromuscular System in Healthy Subjects
—Gennaro Boccia, Owain Evans, Thomas Greenway, Peter McCarthy, Marco Gazzoni, Alberto Rainoldi, Marco Cardinale, *Italy and UK*

ment group but not those in the control group. Further, grip strength improved increasingly in the treatment group after each of the 3 treatments.

In discussing the study Botelho acknowledged its limitations, including the small sample size, and explained that he is now planning a larger trial. He also drew attention to the significant differences between 'spine cracking', which is a common practice among judo athletes, and targeted and skilled professional spinal manipulation. Strengths of the study were that all participants were engaged in daily and regular training and had high competition level, which provided for uniformity among subjects, and none had received prior chiropractic manipulation.

6. History and Status of Spinal Manipulation. This was a second important theme of the Congress. Glenda Wiese PhD, the historian from Palmer College of Chiropractic who was co-author with Alana Callender MS of the chapter on the history of spinal manipulation in Haldeman's *Principles and Practice of Chiropractic*,² lectured on history from ancient times to the 1950s. In the late 19th century chiropractic and osteopathy were just the latest movements to promote the idea that spinal manipulation could relieve pain and influence general health. Hippocrates in the 5th century BCE spoke of manipulation to release the curative forces from within the body. DD Palmer and chiropractic emerged from a 19th century environment in which:

- Physicians Brown and Riodore (UK) and Parrish (US) had been promoting the theory of spinal irritation from subluxated vertebrae
- Andrew Taylor Still MD was founding osteopathy with the theory that blood flow or the lack of blood flow was decisive in causing or curing disease
- Magnetic healing, Palmer's original field, had developed the theory that the friction of the hand along the spinal column imparted a life-giving influence

Palmer, of course, focused on the nervous system and was the first to teach that a specific adjustment of a particular segment to correct a specific subluxation was the basis for successful spinal manipulation. However, while chiropractic and osteopathy championed spinal manipulation in the early 20th century, several other professions including naprapathy and physiotherapy were also adopting this art and science.

David Chapman-Smith spoke of the 1970s-1990s, the era of first significant research into spinal manipulation and the short period in recent history during which manipulation

The type of medical and physiotherapy manipulations in the UK in the 1950s that confirmed the medical view at that time that all manipulation was crude, dangerous and inappropriate.

(Cyriax J, Textbook of Orthopaedic Medicine, 1959)



Dr. Molly Meri Robinson-Nicol (left) and Dr. Mariano Rocabado.



moved from outright medical criticism to substantial acceptance. In the late 1970s medical leaders held that "any manipulation by anyone for anything" was dangerous and inappropriate. By the late 1990s evidence-based clinical guidelines accepted manipulation as a first line option for patients with the most common forms of back and neck pain and headache. Research was now moving to other spine-related disorders such as chest pain, digestive and respiratory disorders and hypertension.

Molly Robinson Nicol DC, a chiropractor on staff at the World Health Organization in Geneva, Switzerland, reviewed WHO's guidelines/benchmarks for chiropractic and osteopathic education, which represent WHO's recommendations to national governments on the necessary training for practice of these professions pursuant to legal regulation and licensure. The WHO recommendations for the two professions are significantly different, with more extensive imaging and other diagnostic requirements for chiropractic practice. Interestingly, the significance of these differences can be seen in recent French legislation for both professions, which gives the chiropractic profession wider rights of primary contact and scope of practice.

Mariano Rocabado DPT, an international leader in spinal manipulation in physical therapy with a special interest in neck mechanics and temporomandibular problems, then presented the history and current status of spinal manipulation in physical therapy. Dr. Rocabado who is Dean, Faculty of Rehabilitation Sciences, Andres Bello University in Santiago, Chile, is at one of the increasing number of universities internationally that provide a formal postgraduate masters or doctoral degree for PTs in manual and manipulative care.

Other presentations, such as those by Haldeman and Kawchuk on the demonstrated neurological and biomechanical effects of manipulation, reviewed the basic and clinical science evidence supporting the new found value of manipulation within wider healthcare. Haldeman also presented the recommendations in support of manipulation for neck pain and headache from the Bone and Joint Decade Neck Pain Task Force.³ Dr. Donald Murphy, well-published in this field and from the Rhode Island Spine Center in the US, presented his research and clinical protocols for management of patients with radiating pain from the cervical spine – employing a range of conservative treatments including spinal manipulation.

In summary, delegates left understanding that the current status for spinal manipulation is that recently it has received a much broader level of acceptance in healthcare, that the chiropractic profession has a leading presence in the field, that education, research and clinical practice are developing significantly within other professions – and that if it is to remain

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Awards and Social Program

The Congress opened with a samba band, the Brazil Night featured the rhythm and flair of Brazilian culture, and Saturday's Gala Banquet and Dance celebrated by 450 chiropractors, students and their partners was inspirational. Featured after-dinner guest speaker at the Gala Banquet was Dr. Marcos Musafir, an orthopedic surgeon and past president of the Brazilian Orthopedic Association who represents Brazil on the International Coordinating Committee (ICC) of the Bone and Joint Decades (BJD).

Dr. Musafir's research preferences include the biomechanics of road traffic injuries, an area in which he was seconded to the World Health Organization in 2008 – 2009. He spoke of the burden of musculoskeletal trauma, pain and disability, the importance of the work of the BJD where a colleague of his on the ICC is Canadian chiropractor Dr. Deborah Kopansky-Giles, and his respect for the role of the chiropractic profession. He offered his support for the profession's current efforts to become fully established and recognized by law in Brazil.

A second speaker was Dr. Richard Visser, Minister of Health of Aruba in the Caribbean. Dr. Visser DC, PhD, a Palmer West graduate whose postgraduate doctoral thesis was in the field of nutrition and the causes of obesity, is the world's only chiropractor holding the office of national minister of health. He amused the audience when he spoke of the difficulty of getting authority to practice chiropractic in his native country of Aruba following his return from Palmer West in the 1980s, but the interesting irony that he now controlled the rights and salaries of those in the healthcare system who had opposed him. The previous day Dr. Visser had joined Dr. Musafir on a hospital visit to surviving students from the mass school shooting in Rio earlier in the week – patients for whom Dr. Musafir had been assigned responsibility.



Dr. Marcos Musafir (left) and Dr. Richard Visser.



Honor Awards

At the Gala Banquet the WFC honored 2 individuals for outstanding contributions to the international development and growth of the chiropractic profession. The first was Dr. Philippe Druart of Belgium, whose many years of leadership in education and practice in Europe culminated in eight years as president of the European Chiropractors' Union through to 2010. Dr. Druart, an Anglo-European College of Chiropractic graduate and former Chair, AECC Board of Governors, served as president of the Belgian Chiropractors' Union as it campaigned successfully to become the first country with Napoleonic law to pass legislation recognizing chiropractic in the late 1990s.

The second honor award, presented by Dr. Gerard Clum, went to Dr. Sira Borges of Brazil who was the founder and first president of the Brazilian Chiropractors' Association (ABQ) upon her return to Brazil from Palmer College in 1990. After ten years as ABQ President leading the development of the profession in Brazil Dr.

Borges has continued to serve as volunteer Executive Director of the Latin American Federation of Chiropractic (FLAQ) leading the development of the profession and promoting new educational programs in Argentina, Chile, Mexico and throughout Latin America.



Dr. Philippe Druart (left) and Dr. Sira Borges give acceptance speeches for their HonorAwards.



Other Awards

WFC Past Presidents Award. WFC Past President Dr. Stathis Papadopoulos (center) is acknowledged for his outstanding service in the Eastern Mediterranean and internationally as he receives his award from WFC President Dr. Mike Flynn. At right his wife and daughter who is currently a chiropractic student at AECC.



Dr. Michael Flynn, WFC President (right) presents WFC awards to those who first brought chiropractic education to Brazil in 1998. (from left, holding certificates) Dr. Gladis Baptista, Dean, Health Sciences, Feevale University, Dr. Dennis Marchiori, Chancellor, Palmer College of Chiropractic, Dr. Sira Borges and Dr. Angela Kolberg. At left is Dr. Juliana Piva, ABQ President. Absent is Dr. Garry Krakos.



FICS Founder's Award. Dr. Stephen Press, the Founder and First President of FICS in 1987 receives a Founder's Award from Dr. Sheila Wilson FICS President and Dr. Philip Santiago FICS Secretary General at the FICS Assembly.

Table 2. Major Prizes – WFC’s 11th Biennial Congress

First Prize: Scott Haldeman Award: Chiropractic Treatment versus Self-management in Patients with Musculoskeletal Chest Pain. A Randomised Controlled Trial *Stochkendahl MJ, Christensen HW, Vach W, Flemming Hoiland-Carlsen P, Haghfelt T, Hartvigsen T* - Nordic Institute of Chiropractic and Clinical Biomechanics & University of Southern Denmark.

Second Prize: Evaluation of Mechanical Sensitivity in an Animal Model of Immobilization Using the Von Frey Method *Trierweiler J, Negrini Göttert D, Gehlen G* – University Feevale, Brazil.

Third Prize: Intra-Oral Chiropractic Craniomandibular Technique for Chronic Myogenous TMD: A Randomized Controlled Trial *Kalamir A, Bonello R, Vitiello A* – Macquarie University, Australia.

Private Practice Prize: Effects of Cervical Manipulative Vertebral Therapy on Judo Athletes Grip Strength *Botelho M, Andrade B* - Clinica Internacional da Coluna, Brazil.

Poster Prizes

First Prize: Assessing the Association between Measures of Quality and Integration and Patients Participation in Interprofessional Patient-Centered Collaborative Care *Mior S, Cockerill R, Barnsley J, Cassidy D, Côté P* – CMCC, Canada.

Second Prize: Complementary and Alternative Medicine for the Treatment of Pain in Fibromyalgia: A Sytematic Review and Meta-Analysis of Randomized Controlled Trials *Terhorst L, Schneider M, Kim K, Stilley C, Goozdich L* – University of Pittsburgh, USA.

Student First Prize: Assessing the Attitudes, Knowledge and Perspectives of Medical Students to Chiropractic *Wong J, Di Loreto L, Kara A, Yu K, Mattia A* – CMCC, Canada.

Student Second Prize: Disinfectant Usage in Chiropractic Practice: From School to Private Clinic Setting *Injeyan HS, Puhl AA, Reinhart CJ, Puhl N, Selinger LB* – CMCC, Canada.

Regional Asia: Effects of Manipulative Therapy on the Expressions of NADPH-Diaphorase and Nitric Oxide Synthase in the Spinal Motor Neurons after Right Knee Joint Immobilization in the Guinea Pig *Jung H, Ham J, Jeong S, Kang J, Lee M* – Hanseo University, South Korea.

Regional Pacific: An Approach Using Fast Rate Stimulation to Investigate Changes in Cerebellar Processing *Haavik H, Murphy B* – New Zealand College of Chiropractic, New Zealand.

Regional Latin America: Effect of High-Velocity, Low-Amplitude Treatment on Superoxide Dismutase and Glutathione Peroxidase Activities in Erythrocytes from Men with Neck Pain *Kolberg C, Horst A, Moraes M, Partata WA* – Universidade Federal do Rio Grande do Sul, Brazil.

Regional North America: Differential Tissue Strain Estimation across Strata of Tissues under Intrinsic Motion *Triano J, Langevin H, Konafagou E* – CMCC, Canada.

Regional Europe: Back Function Preoperatively, 3 Months and 1 Year after Spondylodesis in Patients with Degenerative or Isthmic Spondylolistheses *Neva M, Tarnanen S, Pekkanen L, Hakkinen A* – Department of Musculoskeletal Diseases, Tampere University Hospital, Finland.

a leading discipline in the field chiropractic must continue to expand its research, education and clinical expertise.

7. Original Research. Over 200 original research submissions were received for the Congress, now established as the profession’s foremost venue for the presentation of original research every two years. This is partly because of the substantial prize money from NCMIC Group for the four main awards together with guaranteed early publication in JMPT, the profession’s leading indexed and peer-reviewed journal.

Thirty two abstracts were selected for platform presentation, and 90 for poster presentation. It is an interesting comment on this era of international growth of the profession that all four major prize-winning papers were for research outside North America. A complete list of award winners appears in Table 2. The four main awards were:

a) First Prize – Scott Haldeman Award (\$10,000) *Chiropractic Treatment versus Self-Management in Patients with Musculoskeletal Chest Pain: A Randomized Controlled Trial* *Mette Jensen Stochkendahl, Henrik Wulff Christensen et al.*, Denmark.

Mette Jensen Stochkendahl DC, PhD presented the results of this RCT noting:

- The musculoskeletal system is a common but often overlooked cause of chest pain, and the purpose of this trial was to evaluate the relative effectiveness of chiropractic treatment and self-management for the management of acute episodes of musculoskeletal chest pain.
- The trial was conducted at an emergency cardiology department and four outpatient chiropractic clinics and involved 115 consecutive patients with acute chest pain but no clear medical diagnosis on initial presentation. Patients with clinically demonstrated musculoskeletal chest pain were randomized to four weeks of chiropractic treatment or self-management, with questionnaires administered 4 and 12 weeks post-treatment.
- Primary outcome measures were numeric change in pain intensity and self-perceived change in chest pain. Secondary outcome measures included SF-36 scores and several others.
- Both groups experienced decreases in pain, self-perceived positive changes and increases in SF-36 scores. Subjects receiving chiropractic treatment had a trend to greater improvement on all measures, and this was statistically significant in terms of primary outcome measures at four weeks (self-perceived change in chest pain) and 12 weeks (numeric change in pain intensity) post-treatment.

Stochkendahl et al. conclude “that chiropractic treatment can lead to a faster recovery in patients with acute musculoskeletal chest pain and that the sub-group benefitting from chiropractic treatment can be identified”.⁴

b) Second Prize (\$5,000) *Evaluation of Mechanical Sensitivity in an Animal Model of Immobilization using the Von Frey Method* *Jaqueline Trierweiler et al.* Feevale University, Brazil.⁵



Dr. Mette Jensen Stochkendahl of Denmark (left) and Dr. Jaqueline Trierweiler of Brazil present their award-winning papers.





Dr. Stochkendahl receives the Scott Haldeman Award First Prize from Dr. Claire Johnson, representing sponsoring corporation NCMIC and Editor, JMPT, Dr. Michael Flynn, WFC President and Dr. Scott Haldeman, Chair, WFC Research Council.

- The purpose of this study was to clarify the neurophysiologic mechanisms of the chiropractic adjustment by evaluating mechanical sensitivity in a population of 18 adult male rats first after immobilization of the right hind limb with total knee extension and ankle flexion and then after chiropractic adjustments.
- A control group of 6 rats was not immobilized or adjusted. Of the 12 that were immobilized for four weeks, 6 later received 9 Activator adjustments over 3 weeks on the tibial tubercle, and 6 were not adjusted.
- After four weeks the rats in the immobilized group had increased sensitivity in comparison with those in the control group. That increased sensitivity remained for the rats in the immobilization sub-group that did not receive adjustments – it was greatly reduced in the sub group that received the adjustments.

c) Third Prize (\$3,000) Intra-Oral Chiropractic Cranioman-

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Dr. Silvano Mior of Canada (left) and Dr. Michael Schneider of USA (center), 1st and 2nd Prize winners in the Poster Competition at the Award Ceremony, with Dr. Ed Weathersby, President International Board of Chiropractic Examiners, the sponsoring organization.



dibular Technique for Chronic Myogenous TMD: A Randomized Controlled Trial Allan Kalamir, Rodney Bonello et al. Macquarie University, Australia.⁶

- Chronic temporomandibular disorder (TMD) is common but has a complex etiology and management has historically involved NSAIDS, exercise, various plastic splints, orthodontics and dental surgery of varying degrees of invasiveness. The purpose of this trial was to assess an intra-oral craniomandibular chiropractic protocol for chronic TMD in 93 subjects recruited from dental surgeries who had chronic jaw pain but no recent history of head trauma or craniofacial disease.
- Subjects were randomly assigned to three groups – a waitlist control group, a group receiving chiropractic manual treatments (2 sessions per week for 5 weeks) and a group receiving that chiropractic intervention together with additional education and self-care.
- Primary outcome measures included inter-incisal opening range, resting pain, maximal active opening pain and clenching pain. Assessments were taken at baseline and 6 weeks, 6 months and one year post-treatment.
- Significant differences in pain measurements and inter-incisal opening were observed between the treatment and control groups immediately post-treatment and at 6 months and at one year post-treatment. Patient satisfaction ratings were moderate to high through to one year post-treatment and Kalamir et al. conclude that their chiropractic protocol “presents a potentially viable alternative or adjunct to other more invasive treatments for chronic TMD”.

d) Private Practice Award (\$2,000) Effect of Cervical Manipulative Vertebral Therapy on Judo Athletes Grip Strength Marcelo Botelho, Bruno Andrade, Brazil.⁷ See paragraph 5 for comment on this paper. **TCR**

References

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- 4 Stochkendahl MJ, Christensen HW et al. (2011) *Chiropractic Treatment versus Self-management in Patients with Musculoskeletal Chest Pain. A Randomised Controlled Trial*. Proceedings of the 11th Biennial Congress of the World Federation of Chiropractic, Toronto, Abstract, 122. Full paper in print.
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- 6 Proceedings of WFC's 11th Biennial Congress, 111-112, Abstract. Full paper in print.
- 7 Proceedings of WFC's 11th Biennial Congress, 134, Abstract. Full paper in print.