

The Chiropractic Report

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Professional Notes

Sports Chiropractic at Pan American Games

The host services sports medicine team for the Vancouver Winter Olympics and Paralympics last year included a team of 22 sports chiropractors available to serve athletes from all national teams.

Similar arrangements have been made for the XVI Pan American Games to be held in Guadalajara, Mexico October 14-30, 2011. These Games feature national teams from 41 nations from throughout the Americas and the Caribbean, teams that will compete in 361 events in 36 sports.

There will be an international team of 40 sports chiropractors and applications are currently being received through the Fédération Internationale de Chiropratique du Sport (FICS) website – www.fics-sport.org. COPAG, the host organizing committee, has appointed Dr. Saul Luengas (right) of Queretaro, Mexico as COPAG Chief of Chiropractic Services.



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Continuing Care and Therapeutic Need

“SMT is effective for the treatment of chronic non-specific LBP. To obtain long-term benefit, this study suggests maintenance spinal manipulation after the initial intensive manipulative therapy”.

Senna and Machaly, *Spine* 2011¹

A. Introduction

SINCE THE LATE 19TH CENTURY the ancient art of spinal manipulation has been resurrected, promoted and now placed on a sound scientific and clinical foundation in the modern era by the chiropractic and osteopathy professions.

All voices that challenge the orthodoxy and vested interests of the times have a difficult road to travel. That is true if you are an insider, such as Louis Pasteur or Ignaz Semmelweis in medicine. It is doubly true if your voice is that of an outsider – such as a profession developing independently from mainstream medicine and without that profession's resources, privileges and cultural authority in society.

It should not surprise anyone, therefore, that the work of chiropractors and osteopaths in the development of spinal manipulation for one of humankind's most common, disabling and costly problems worldwide, non-specific back pain, has gone through these typical stages in recent generations:

- At first broad rejection by mainstream medicine. This was without investment in research to explore the possibilities emerging from the preliminary research from the chiropractic and osteopathy professions.
- Postgraduate training efforts by many in the medical profession (largely informal and unsuccessful) and its allied physiotherapy profession (over time more formal and proving more successful) to achieve delivery and ownership of manipulation, in the meantime

continuing to call spinal manipulation “controversial”.

- Official acceptance in the scientific and academic communities as reflected in current evidence-based clinical guidelines, but on a medical model rather than a chiropractic or osteopathic one.

The hallmark of the medical model is a brief course of treatments to relieve symptoms – in European manual medicine traditionally one or two manipulations only – with no continuing care once symptoms have abated. Hallmarks of the chiropractic model, which according to a now firm body of research produces not only effectiveness and cost-effectiveness but also high patient satisfaction levels, are a more focused course of initial treatments and then a course of continuing care at reduced frequency of visits. This model puts manipulation in its appropriate context having regard to the biophysicsocial nature of spinal problems, the overall context of the chiropractic clinical encounter, and the true needs of patients.

2. This article is being written because of a profound event. The foremost international medical spine-specialty journal *Spine* has just published the first ever trial from medical specialists managing patients with chronic non-specific low-back pain (LBP) on a chiropractic model – and it reports results that are excellent but will not surprise doctors of chiropractic, namely:

- Patients who received an initial course of spinal manipulation of 3 visits per week for one month had statistically significant and clinically important reductions in pain and disability compared with those who received a similar course of sham manipulations.
- Patients whose initial course of manipulation was then followed by “maintenance spinal manipulations”

every two weeks for nine months maintained and increased their benefit, whereas those who did not receive this continuing course of care in the second phase of the trial lost their earlier improvement.

All of this was notwithstanding that all subjects in the trial were instructed in appropriate exercises. In this article we review this new trial, which is from Senna and Machaly, medical specialists from an out-patient clinic dedicated to back pain at the Rheumatology and Rehabilitation Department, Mansoura University Hospital in Egypt. We then comment further on the chiropractic model of care generally.

B. Mansoura University Trial

3. Goals. Senna and Machaly commence their paper by explaining that low-back pain (LBP) is one of the most common musculoskeletal ailments worldwide affecting up to 80% of the adult population at some point during their lives. Three main categories of LBP are specific spinal pathology, nerve root pain/radicular pain – and non-specific LBP.

“Non-specific LBP represents about 85% of LBP patients seen in primary care. About 10% will go on to develop chronic disabling LBP. It is this group of LBP (patients) that utilizes the majority of healthcare and socioeconomic costs”.

They explain that there is now evidence in the literature that spinal manipulation is effective in the management of patients with both acute and chronic non-specific LBP. However little is known about the best frequency and duration of treatment. In particular there have been no randomized controlled trials of the potential benefits of continuing treatment to maintain benefits following initial more intensive care. Accordingly their trial had these two main goals:

- In Phase 1, to test the effectiveness of spinal manipulation (SMT) in the management of patients with non-specific chronic LBP. Chronic LBP, often defined as pain persisting for at least 12 weeks, was defined as pain persisting for at least 6 months in this trial.
- In Phase 2 “to determine the effectiveness of maintenance SMT in long-term reduction of pain and disability levels associated with chronic low-back con-

ditions after an initial phase of treatments”.

4. Subjects. Subjects were 60 patients with chronic non-specific LBP recruited from the outpatient clinics of the Rheumatology and Rehabilitation Department at a major university hospital affiliated with the Faculty of Medicine, Mansoura University in Mansoura, Egypt. A total of 154 patients were examined for the trial. To be included patients needed to be between 20 and 60 years of age and have pain that had lasted for at least 6 months. In fact they had experienced pain on average for 18 months – this was a truly chronic population of patients with moderate to high levels of pain and disability. Exclusion criteria included:

- Red flags for serious spinal conditions (e.g. tumor, compression fracture, infection).
- Signs consistent with nerve root compression.
- Spondylolithesis, spinal stenosis, ankylosing spondylitis, osteoporosis.
- Prior surgery to the lumbar spine.
- “Obvious psychiatric disorders”.
- Previous experience with SMT.

5. Methods. After a baseline evaluation eligible patients were randomly assigned to one of three groups matched for age and sex:

a. Control group. Each subject received sham spinal manipulations over a one month period at a frequency of 3 treatment visits a week for 4 weeks. Sham techniques consisted of manually applied forces of diminished magnitude aimed purposely to avoid treatable areas of the spine and to provide “minimal likelihood of therapeutic effect”.

b. SMT Group. Subjects received “standardized spinal manipulations” in 12 treatment visits over a one month period on the same frequency as the Control Group. Manipulation was given by physicians said to be certified and well trained in manipulation and in practice for more than 10 years in an outpatient clinic specializing in the management of a large number of patients with LBP. Manipulation was performed with the patient supine and is described as follows.

“The side to be manipulated first will be the more symptomatic side based on the patient’s complaint followed by manipulation of the opposite side. . . .The therapist stands on the side

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opposite of that to be manipulated. The patient is passively moved into side-bending towards the side to be manipulated (the patient will lie with the more painful side up). The patient interlocks the fingers behind his or her head. The therapist passively rotates the patient, and then delivers a quick thrust to the anterior superior iliac spine in a posterior and anterior direction. If a pop sound occurred, the therapist will proceed to instruct the patient in the ROM exercises. If no pop is produced, the patient will be repositioned and the manipulation will be attempted again. If no pop sound occurred, the manipulation was attempted again (a maximum of 2 attempts per side was permitted). If no pop sound is produced after the second attempt, proceed to instruct the patient in the pelvic tilt ROM exercises”.

c. Maintained SMT Group. In Phase 1 of the trial subjects received exactly the same management as those in the SMT Group. However in Phase 2 they then

received continuing “maintenance SMT” every two weeks for a period of 9 months.

Patients in all three groups were instructed in a pelvic tilt range of motion (ROM) exercise after manipulation or sham manipulation. The exercise was performed within a pain-free range. Subjects were instructed to perform 10 repetitions after each manipulation, and 10 repetitions three times daily on all days that they were not attending for treatment. They were also given general back education and instructions at the commencement of the first treatment phase.

6. Outcome Measures. A strength of the trial is that it combined both subjective and objective outcome measures. These were administered at baseline and at 1-month, 4-month, 7-month and 10-month intervals. Subjective patient-based assessments were:

- The Oswestry Disability Questionnaire for LBP-specific functional and disability assessment. This questionnaire consists of 10 items addressing different aspects of functional capacities. Each item is scored from 0 to 5 with higher values representing greater disability. The total score is multiplied by 2 and expressed as a percentage.
- The visual analogue scale (VAS) for current intensity of pain.
- The Short Form-36 (SF-36) General Health Questionnaire. This 36-item questionnaire measures 8 dimensions – general health perception, physical function, physical role, bodily pain, social functioning, mental health, emotional role and vitality. It is established as valid and reliable in the measurement of generic health status.
- Patient global assessment of outcome. In this five level instrument patients are asked to compare their current back-related health status to the baseline status with the following choices – much better, somewhat better, mostly the same, somewhat worse and much worse.

The two objective outcome measures were spinal flexion (modified Schober test) and lateral bending to measure changes in spinal mobility.

7. Results. First a note on blinding of observers and patients. All assessment of results was performed by the two physician/therapists providing treatment, but blinding was achieved because “patients who were manipulated by one physician were assessed throughout all the trial follow-up periods by the other physician who was completely blind to group assignment of patients being assessed”.

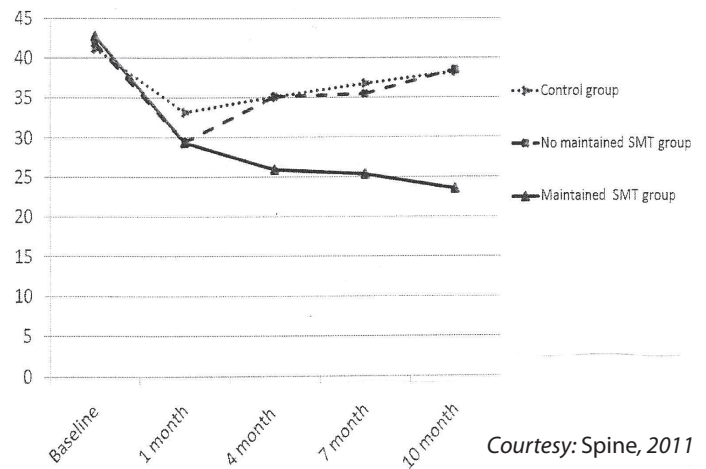
Patients were partially blinded in that they were not told the exact hypothesis, treatments or protocols being tested in the trial or that there was a sham or placebo group. They just knew that different treatments were involved. All could reasonably expect benefit.

Turning now to specific results:

a. VAS Pain Scores. Results appear in Figure 1.

- At one month the average pain reduction in the Control Group was approximately 8% (41.2-33.18) but by 10 months that initial modest benefit was largely lost. This is consistent with the recognized phenomenon in clinical trials, known as the Hawthorne Effect, that everyone in a trial tends to experience a general placebo effect for a period because of the attention being received, but that there are no specific and lasting treatment effects.

Figure 1. Pain score (VAS) over the 10-month period.



- At one month average pain reduction in both the SMT groups was significantly higher - approximately 13%. In the pure SMT Group that benefit was lost during the next 9 months, with subjects having on average the same final result as those in the Control Group.

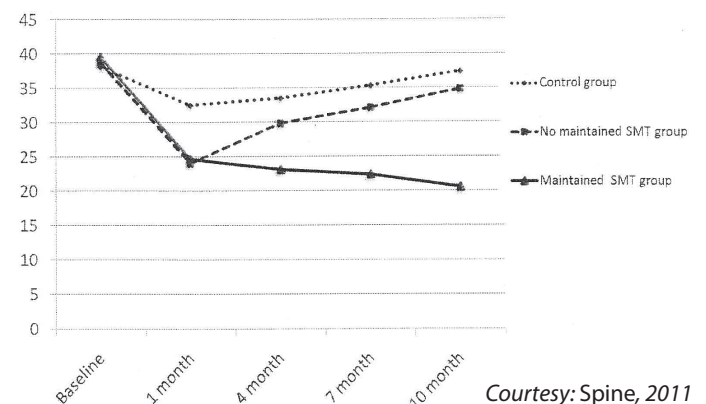
- However at the end of 10 months the Maintained SMT Group both maintained and improved upon its one month scores. Severity of pain was reduced from 42.80 to 23.54, a reduction of almost 20 points or 50%. This was a statistically significant 15 point greater reduction in pain severity than for the SMT group – notwithstanding that reduction in pain severity had been the same for both groups after the first phase of the trial.

b. Oswestry Disability Questionnaire. Results are seen in Figure 2 and were even more favorable for the treatment groups on this key outcome measure for reduced disability.

- At baseline all three groups had average functional disability levels of approximately 40% on the Oswestry – regarded as moderate to severe disability. In short this was a very chronic and disabled population of patients overall.
- An improvement of 6% on Oswestry score over time is regarded as “minimally clinically important” – i.e. the benchmark for clinical importance of results.
- At one month the Control Group receiving sham manipulation failed to reach that level of improvement and at 10 months had basically returned to baseline status.

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Figure 2. Oswestry Disability Score (%) over the 10-month period.



The Chiropractic World

Sports Chiropractic at Pan American Games

continued from page 1

Dr. Luengas, a 1994 graduate of Palmer College West Campus, San Jose, California is the Vice-President of the Federación Mexicana de Quiropractica Deportiva (FMQD), the specialty council for sports chiropractic in Mexico. Joining him on the Planning Committee for chiropractic services are Dr. Moises Hernandez, FMQD President, Dr. Sheila Wilson and Dr. Philip Santiago, FICS President and Secretary-General, and Dr. Angela Salcedo and Dr. Dale Richardson, President and Secretary-General of the International Sports Chiropractic Association (ISCA).

It is a major achievement for athletes and the profession that chiropractic services are available for all athletes in the host medical services team, rather than just with individual national teams. What follows are extracts from an interview with Dr. Saul Luengas appearing in this month's issue of the FICS News. That publication, with the full interview, may be found under Publications at www.fics-sport.org.



Dr. Luengas working as team chiropractor for El Salvador at the Athens Summer Olympics in 2004.

How did you decide upon a chiropractic career?

As for many people it was because of successful treatment. In the late 1980s I was attending the Centro Universitario Mexico (CUM) in Mexico City, where I got my bachelors degree in biochemistry in 1988, and playing semi-professional soccer as a defender. I was planning to progress to a career in sports medicine and completed a six months pre-med course. During this time I suffered an ankle sprain and on family advice went to Dr. Francisco Montano and experienced my first adjustments. I was able to play football again within two weeks and was very impressed. Dr. Enrique Benet, a chiropractic leader in Mexico, arranged a scholarship for me to attend Palmer West. I went there with the goal of becoming a sports chiropractor – and that has remained my passion to the present time.

Describe your practice.

My clinic named Centro Quiropractico Integral has a main focus on sports chiropractic and rehabilitation. With me in my practice is an x-ray room with a radiological technician, a rehab room with two physiotherapists, and a chiropractic assistant. My wife Martha Laura is administrator. About 70% of the practice involves athletes – many from golf, triathlon and football – and about 30% is a general chiropractic practice.

We have excellent referral relationships with medical specialists, both referral of sports injury patients to us and referral out of patients requiring surgery or other medical care.

I understand you have a masters degree in sports science?

Yes. My first postgraduate studies were in sports chiropractic. In 2001 I completed a Certified Chiropractic Sports Physician (CCSP) qualification through the Northwestern University of Health Sciences in Minneapolis. Subsequently I have gained an ICSSD and various certifications – for example FAKTR-PM and taping through Spider Tech. However in 2008 I completed a masters degree in Sports Science and High Performance from the University of Sports Science and Soccer. This is the first university and masters degree of this type in Mexico, and has been established by one of the leading professional football clubs in the country – Pachuca. Pachuca won the South American Cup, the competition for leading club teams in South America, in 2008. My thesis was research on chiropractic management of Tae-Kwon Do athletes.

Why Tae-Kwon Do?

I was seeing a lot of Tae-Kwon Do athletes. In 2005 I had been asked to be the official chiropractor for the Queretaro State Tae-Kwon Do Team. Because this had some of the Mexican National Team athletes I then became the chiropractor for the Mexican National team in 2007. I have served at many national and international events and at the 2009 World Championships sponsored by the World Federation of Tae-Kwon Do (WTF) in Copenhagen, Denmark I presented my research at the TKD Symposium and was appointed to the TDK Research Study Group on which I still serve.

What was the point of your research?

My masters thesis was titled *Chiropractic Treatment and Isokinetic Evaluation of the Lumbopelvic Area of Elite Tae-Kwon Do Athletes of the Queretaro State Team in Mexico*. This included case studies demonstrating how much elite athletes could improve their performance after chiropractic management of lumbopelvic restrictions.

What are the most common injuries for Tae-Kwon Do athletes?

They are knee and ankle injuries, which typically require a range of treatments from adjustment to modalities to taping. In com-



The COPAG Scientific Committee for the XVI Pan American Games, including Dr. Eloy Marquez Cenicerros, Medical Coordinator (front row centre right) and Dr. Saul Luengas (back row, second from left).

News and Views

petition an athlete may have five or six fights a day. Athletes are frequently injured and benefit enormously from chiropractic care. In my experience it has often been the difference between not being able to continue and going on to win the competition. This is my passion, my excitement in sports chiropractic – helping patients to do their best and even win through improved function and performance and managing injuries along the way.

Have you ever thought of taking up Tae-Kwon Do yourself?

Of course. Right now I have a red belt and am going for my black belt.

COPAG has appointed you Chief of Chiropractic Services for the XVI Pan American Games to be held in Guadalajara from October 13-30, 2011. Congratulations. How did that happen?

FICS and the FMQD were negotiating with COPAG for the provision of chiropractic services. I represented the FMQD at the last FICS Biennial Assembly in Montreal in 2009 and that resulted in me being part of the FICS negotiating team. Others were Dr. Juan Sanchez of Parker College of Chiropractic, formerly Director of Chiropractic Studies at UNEVE in Mexico, and Dr. Marcelo Botelho, who represents Latin America on the FICS Council and Games Commission. Another organization, the International Sports Chiropractic Association (ISCA) led by Dr. Angela Salcedo, was also meeting with COPAG. COPAG's Medical Coordinator, Dr. Eloy Marquez Cenicerós was very supportive of having chiropractic services, wanted an overall coordinator and appointed me.

Describe your responsibilities.

These are to coordinate all aspects of chiropractic services for the Games. This includes not only the 40 chiropractors who will be serving on the team at the Games but also the chiropractic presentations at the Pan American Sports Medicine Congress which is affiliated with the Games but being held July 27-31. Chiropractic involvement at that Congress includes a three day workshop and plenary speakers at the main interprofessional symposium. These will be led by Dr. Bill Moreau, the sports chiropractor who is now Director of Sports Medicine Clinics for the US Olympic Council speaking on *Chiropractic in Multidisciplinary Sports Practice*.

Leading sponsors who we all have to thank much, include Logan College of Chiropractic, the Northwestern University of Health Sciences and Spider Tech.

This sounds like a lot of work.

It is demanding. Since early last year I have travelled to meetings in Guadalajara at least once every month. This is about four hours by car from where I live. However I have a lot of help from a strong planning committee. Members of that are Dr. Moises Hernandez, FMQD President, Dr. Sheila Wilson and Dr. Phil Santiago from FICS and Dr. Angela Salcedo and Dr. Dale Richardson from ISCA.

Any final comment?

Anyone getting into sports chiropractic must understand that it is very demanding. You need continuing postgraduate train-

ing to broaden your skills, and working with athletes at competitions and elsewhere requires much time out of the office. However I have a passion and a love for what I do as a sports chiropractor. When I am at a Tae-Kwon Do competition with the athletes, helping them between fights, I feel like I am one of the fighters myself. There may be many demands but there are many rewards. Those doctors on our team for the Pan Am Games in Guadalajara this year are going to have the sort of life time memories I believe you can only get through commitment to sports chiropractic.

\$7.4 MILLION Grant for US Military Readiness Research

Scientists from the RAND Corporation in California, the Palmer Center for Chiropractic Research (PCCR) at Palmer College in Davenport, Iowa and the Samueli Institute have been awarded a \$7.4 million grant by the Congressionally Directed Medical Research Program. This is the largest single award for chiropractic research ever and will be used to conduct the largest clinical trial evaluating chiropractic to date.

The grant will fund a four-year multicenter research project to assess chiropractic treatment for military readiness in active duty personnel. Sites will be military health centers in Bethesda, Maryland, Pensacola, Florida, San Diego, California and Rock Island, Illinois.



Ian Coulter, PhD (left) the Samueli Institute Chair in Policy for Integrative Medicine at RAND Corporation, and a Past-President of the Canadian Memorial Chiropractic College, is the research project's principal investigator. Co-principal investigator and Palmer College of Chiropractic's Vice Chancellor for Research and Health Policy Christine Goertz, DC,

PhD (right) will oversee the design and implementation of the three clinical trials funded by this award. The Palmer Center for Chiropractic Research will receive approximately \$5.1 million in order to accomplish this task. Samueli Institute Vice President for Military Medical Research Joan Walter, JD, is a second co-principal investigator for this project.



Because musculoskeletal injuries are among the most commonly occurring injuries in military personnel and may reduce levels of performance and readiness, the study will assess the efficacy of chiropractic treatment for active duty military personnel in a number of areas. Through three clinical trials, the study will assess chiropractic's effectiveness in:

- relieving low back pain and improving function in active duty service members;
- evaluating the effects of chiropractic treatment on reflexes and reaction times for Special Operations forces;
- determining the effect of chiropractic treatment on strength, balance and injury prevention for members of the Armed Forces with combat specialties; and
- assessing the impact of a chiropractic intervention on smoking cessation in military service members.

- At one month each of the SMT groups had improved by approximately 8.0% and 8.4% respectively over the Control Group, a statistically significant and clinically important improvement. Total improvement against baseline for these groups was approximately 13%.

- At 10 months there was the finding that will be of greatest interest to chiropractors. The Maintained SMT Group had maintained its improvement, but the SMT group had not. There was now a disability improvement of 14.3% in favor of the Maintained SMT Group. Senna and Machaly conclude: “The disability score difference (> 14 points) observed after 10 months in the current study between the Maintained SMT Group and the Non-Maintained SMT Group is statistically significant and clinically important”.

The Maintained SMT Group actually had a slightly higher disability score at baseline than the others. This means that the average overall reduction of disability on the Oswestry in the Maintained SMT Group at 10 months was approximately 20% (18.98%). As the initial Oswestry score for the group was 39.6% this represents a reduction of disability by half. Another way of expressing the impact of this is that patients who had an overall rating of moderate to severe disability at baseline now had a rating of minimal to moderate disability.

c. SF-36 Scores and Patients’ Global Assessment of Outcomes. The SF-36 questionnaire showed significantly better outcome after the one month initial phase for both the SMT groups compared to the Control Group, this continued during the second phase only for the Maintained SMT Group, and by the end of the second phase there was a significant difference in scores between the Maintained SMT Group and the SMT Group. Global assessment of improvement by patients taken at the 10 months evaluation at the end of the second phase showed significantly better results in the Maintained SMT Group, namely:

- 65% reported their back problem much or somewhat better, compared with 35% in the SMT Group and 30% in the Control Group.
- 15% reported somewhat or much worse compared to 30% in the SMT Group and 45% in the Control Group.

d. Objective Measurements – Change in Spinal Mobility. There was increase in spinal flexion and lateral bending ROMs only in the SMT groups at one month. In the Maintained SMT Group ROMs continued to increase during the second phase to 10 months, while in the SMT group not receiving continuing care ROMs returned to nearly the pre-treatment level at 10 months.

e. Overall Conclusion. Senna and Machaly’s overall conclusions, as quoted at the outset of this article, are “SMT is effective for the treatment of chronic non-specific LBP. To obtain long-term benefit, this study suggests maintenance spinal manipulation after the initial intensive manipulative therapy”.

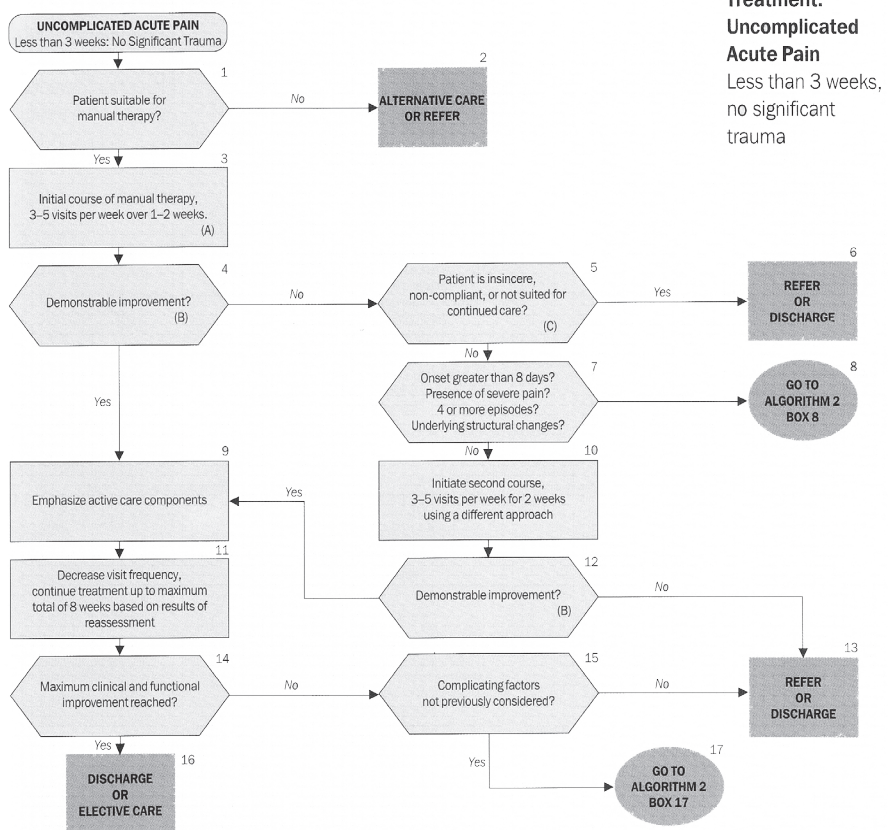
9. Discussion. So there it is. Now there is a well-designed medical trial in essence adopting the chiropractic model of an initial course of intensive manipulation followed by continued or maintenance treatments at a reduced frequency, and reporting this effective. Senna and Machaly observe “since patients did benefit from the maintenance treatments we believe that periodic patient visits permit proper evaluation, detection and early treatment of an emerging problem thus preventing future episodes of LBP”. Sounds very chiropractic. The innovative trial design is of particular interest because it covers three much debated issues in one study:

- Whether the benefits of spinal manipulation derive from specific treatment effects or general placebo effects. Here there were both sham manipulation (giving hands-on placebo effects) and active manipulation (high-velocity techniques giving specific treatment effects and benefits not seen with sham manipulation). So this trial supports the position that joint manipulation has different and greater effects than placebo alone. (It seems clear however that a source of the power of skilled manual healthcare, and first and foremost joint manipulation, is that it recruits and combines both specific and placebo effects).

- Whether there are objective biomechanical benefits of

Algorithm 1

Based upon The Canadian Chiropractic Association Guidelines (Glenerin, 1993)



Annotation A: Promotion of active care and the prescription of exercises should be initiated as soon as possible.

Annotation B: Improvement measured objectively, e.g., Oswestry Back Pain Disability Index, Neck Disability Index, pain scales, physiological measurements such as range of motion or muscle strength.

Annotation C: Patients may present with underlying conditions that make spinal manual therapy inappropriate or that require psychological assessment.

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manipulation and benefits that can be measured. This trial included the objective measures of spinal ranges of motion of flexion and lateral bending – and illustrated that manipulation influences these.

(There is of course evidence for many other biomechanical and neurological effects. Senna and Machaly, referencing Meeker and Haldeman, mention “postulated modes of action of SMT include disruption of articular or peri-articular adhesions, improvement of trunk mobility, relaxation of hypertonic muscle by sudden stretching, release of entrapped synovial folds or plica, attenuation of alpha-motor neuron activity, enhancement of proprioceptive behavior and release of beta endorphins thus increasing pain threshold. These mechanisms are expected to be sustained during maintenance of SMT”).

c. Whether continuing care has a legitimate role. This trial, because it was designed to include SMT groups with and without continuing care, addresses that issue also as fully discussed already. Senna and Machaly do observe that much further research needs to be done to establish optimum duration and frequency of continuing care. No one will quarrel with that. That is a controversial area that has been addressed in clinical guidelines developed by the chiropractic profession since the early 1990s. We now turn to look at that.

C. Duration and Frequency of Care

10. What is an appropriate number and frequency of chiropractic treatment visits, typically including various manual healthcare methods including joint adjustment or manipulation, for a patient with acute uncomplicated low-back pain, another with chronic headaches and a third wanting preventive care?

At one end of the scale there are embarrassing stories of patients with a first attack of acute LBP consulting a chiropractor who says that 100 treatments will be necessary to solve the complex problems of their spines and that they should open large prepayment accounts at the office to cover the next two years’ treatment. At the other end of the scale there are health maintenance organizations (HMOs) and other managed care organizations that seek to limit treatments to 3 to 6 chiropractic visits. All authorities on manipulation and spinal rehabilitation accept that this is inadequate for most patients. So, how frequently and for how long should patients receive treatment?

11. Frequency and duration of care are issues on which the chiropractic profession has established formal national clinical guidelines in the US and Canada since 1993.^{2,3} Those early evidence-based guidelines were, as one would expect, quite

similar. In their essential points they remain current and in important respects they were adopted by subsequent interdisciplinary national acute and chronic back pain guidelines panels commencing with the AHCPR Guidelines in the United States in 1994⁴.

Key points appear in the following summary comments and algorithms:

a. Acute Uncomplicated Pain – Algorithm 1.

- This algorithm applies to patients with acute pain for 3 weeks or less. It provides for 3-5 treatments a week for 4 weeks. If there is no documented improvement within 2 weeks treatment should be modified or the patient referred for other care. If there is modified care but still no documented improvement at 4 weeks, treatment should stop with the patient referred to another professional for a second opinion.

- Typically such a patient is treated up to 3 times weekly for 2 weeks, then 3 times to 1 time weekly in the next 2 weeks depending upon progress, re-injury etc. This amounts to 8-12 treatments over 4 weeks.

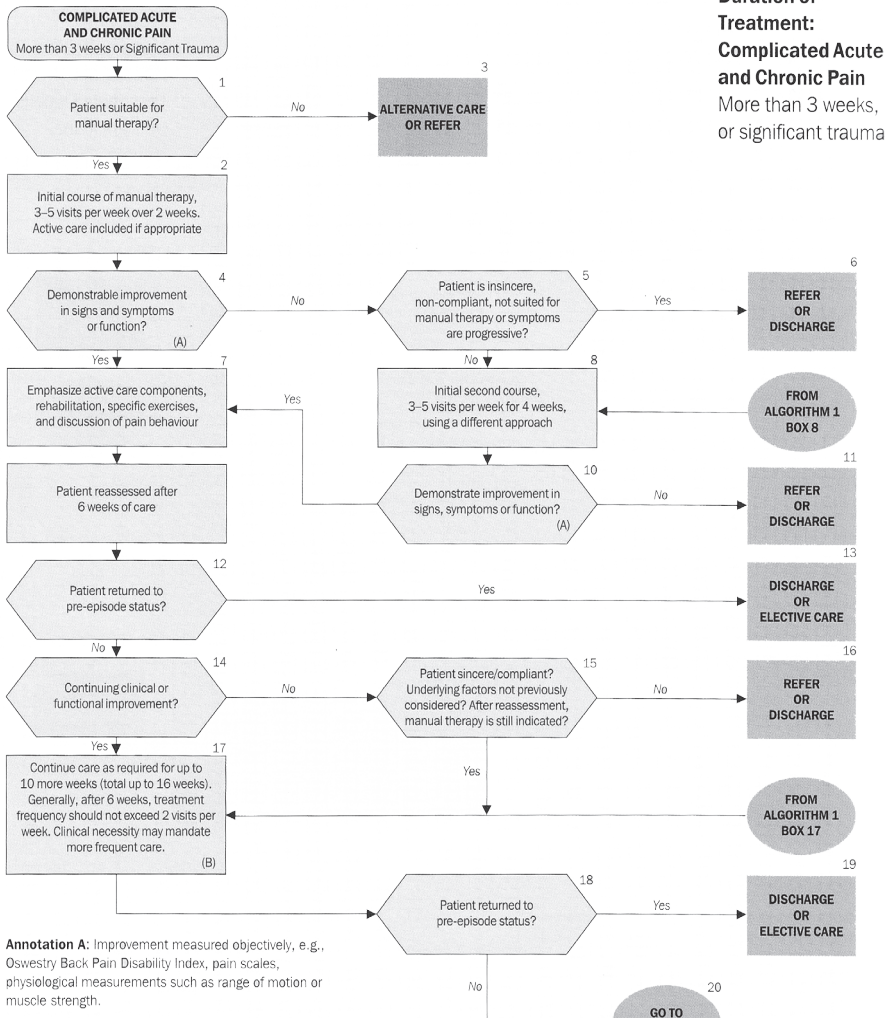
- If there is documented improvement (e.g. in terms of patient disability questionnaires, pain scales, objective measures of range of motion and pressure tenderness etc., recorded in the patient’s file) treatment may continue for up to another 4 weeks, or 8 weeks total.

- Frequency of care drops to 1 or 2 visits per week. The frequency chosen may relate to various factors – including, for example, the need to monitor the correct performance of prescribed exercises.

b. Pain with Complications – Algorithm 2.

Algorithm 2

Based upon The Canadian Chiropractic Association Guidelines (Glenier, 1993)



Annotation A: Improvement measured objectively, e.g., Oswestry Back Pain Disability Index, pain scales, physiological measurements such as range of motion or muscle strength.

Annotation B: During a period of continued care, reassessment at frequent intervals (maximum 6 weeks) should be made to determine need for care.

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- This algorithm applies to patients with acute pain and complications (e.g. significant trauma, severe pain, significant underlying spinal degeneration, a disc problem with referred pain to the leg, etc.) or recurring or chronic pain (e.g. this is the most recent of several disabling attacks of spinal pain, or the back pain/other pain has been experienced for 12 weeks or more).

- Treatment may be slightly more frequent (e.g. 3 times weekly for 4-6 weeks, then 2 times weekly for another 4-6 weeks) and for a longer duration (e.g. up to a total of 16 weeks). However, many patients can expect a successful result within 4-6 weeks.

c. Supportive Care – Algorithm 3

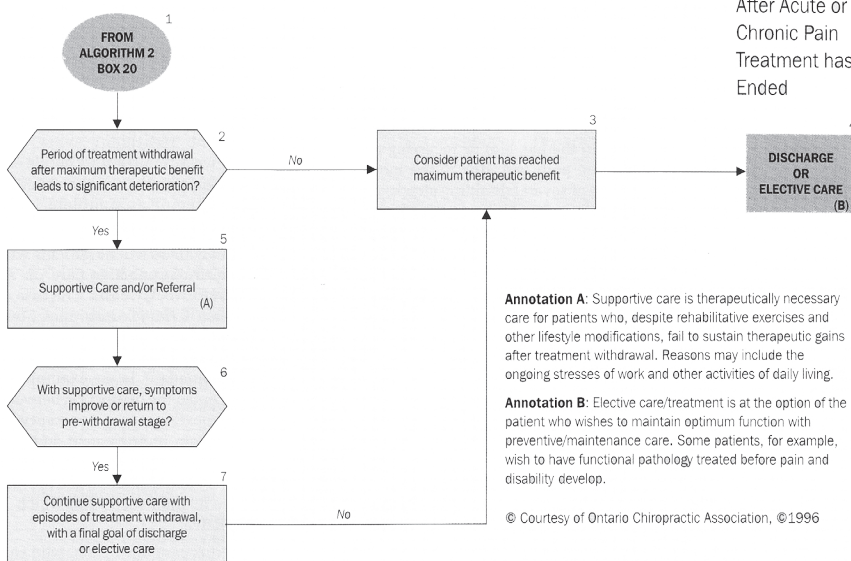
- Both the US and Canadian guidelines define two different forms of longer term chiropractic treatment:

i. Supportive Care. Treatment for patients who have reached maximum improvement, but who fail to sustain this improvement and progressively deteriorate when treatment is withdrawn. (In other words, *supportive care* is therapeutically necessary).

ii. Preventive/Maintenance Care. Treatment for a patient who has no present pain or symptoms but seeks to prevent pain and disability, promote health and enhance the quality of life. (In other words, *preventive/maintenance care* is not therapeutically necessary from the patient's point of view, but is optional or elective).

Algorithm 3

Based upon The Canadian Chiropractic Association Guidelines (Glenerin, 1993)



Frequency and Duration of Treatment:
Supportive Care
After Acute or Chronic Pain
Treatment has Ended

- Algorithm 3 illustrates the role of supportive care. It does not explain how many treatments are involved because, as the US and Canadian guidelines say, “the frequency of treatment must be determined on an individual case basis as dictated by therapeutic necessity”.

- Typically supportive care might involve 3-6 treatments over 2 weeks to arrest returning pain and disability, then one treatment every 2-4 weeks for a settling period of a few months and then another attempt at complete withdrawal of care.

12. In the new Mansoura University trial the term *maintenance* manipulation or care is used for what is *supportive* care under the chiropractic guidelines. Ironically medical researchers are using a term formerly used by the chiropractic profession but avoided in recent times because of its perceived connotations of care maintained or continued without apparent end.

However what is tested and affirmed in the Mansoura University trial is that, whatever name you give it, there is an important and therapeutically necessary role for continuing care with many patients. **TCR**

References

- 1 Senna MK, Machaly SA (2011) *Does Maintained Spinal Manipulation Therapy for Chronic Non-Specific Low-Back Pain Result in Better Long Term Outcome?* Spine DOI: 10.1097/BRS.0b013e3181f5dfe0.
- 2 Haldeman S, Chapman-Smith DA, Peterson DM eds (1993) *Guidelines for Chiropractic Quality Assurance and Practice Parameters*. Aspen Publishers, Gaithersburg, MD.
- 3 Henderson D, Chapman-Smith DA, Mior S, Vernon H eds (1994) *Clinical Guidelines for Chiropractic Practice in Canada* Suppl to JCCA 38(1).
- 4 Bigos S, Bowyer O, Braen G et al. (1994) *Acute Low-Back Problems in Adults*. Clinical Practice Guidelines No. 14. Rockville, Maryland: Agency for Health Care Policy and Research, Public Health Service, US Department of Health and Human Services AHCPR Publication No. 95-0642.

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