

THE CHIROPRACTIC REPORT

Editor: David Chapman-Smith LL.B. (Hons.)

May 1998 Vol. 12 No. 3



PROFESSIONAL NOTES

Chiropractic in the US

Chiropractic in the United States: Training, Practice, and Research, Editors - Daniel C. Cherkin PhD and Robert D. Mootz DC, National Technical Information Service, US Department of Commerce, Document No. PB98111693.

This important new report on chiropractic in the United States was funded by the US Department of Health and Human Services (Public Health Service, Agency for Health Care Policy and Research) and is a gold mine of statistics and other information. The scope of the document is described in its Abstract:

"In view of the growing popularity of chiropractic care, it is important that health care providers, insurers, policy makers, and persons with back pain have a better understanding of the current capabilities and limitations of chiropractic care. This report, which reflects a collaboration among scholars, researchers, and practitioners from both the medical and chiropractic communities, attempts to provide an unbiased overview of what is and is not known

continued on page 4

CERVICOGENIC HEADACHE

New Anatomical Discovery Provides the Missing Link

A. INTRODUCTION

Who would have thought that it would still be possible to make new discoveries in gross anatomy in the 1990s? In a development of major importance to headache patients and the chiropractic profession new bridges of connective tissue have been found between the posterior muscles and the dura (myodural bridges) in the upper cervical spine, bridges that give a strong, new anatomical basis for headache caused by cervical spine dysfunction.

The discovery was first made in 1995 by Gary Hack DDS, Richard Koritzer DDS et al, dental researchers at the University of Maryland, Baltimore.¹ It was based on dissections of 1 fresh and 10 embalmed cadavers, but has now been confirmed by various researchers in Europe and North America and by neurosurgeons on live patients. After further research, and in a paper just published by *Encyclopaedia Britannica* in its 1998 *Medical and Health Annual* for the general public,² Hack et al now claim that these new connections between the muscular system and the central nervous system "may go a long way toward helping to explain the relationship between headache and muscle tension." They continue:

"Spinal manipulation as a treatment for tension headache is predicated upon the assumption that dysfunction in the neck muscles contributes to the head pain; in the US more than 90% of such procedures are performed by chiropractors. The muscle-dura connection may represent - at least in part - the underlying anatomic basis for the effectiveness of this treatment. Such treatment, as performed by a chiropractor, would decrease muscle tension and thereby reduce or eliminate pain by reducing the

potential forces exerted on the dura via the muscle-dura connection.

It is interesting to note that surgeons who have severed this connection as part of some other surgical procedure have found that at least some of their patients experience fewer chronic headaches afterward. This would support the concept that neck muscles may pull on the sensitive dura via the newly described connection and thereby produce the pain."²

2. This new knowledge, discussed in more detail with illustrations in this Report, is particularly significant because of the continuing disagreement amongst different health care professionals, and amongst medical experts themselves, as to the causes, diagnosis and classification of headache. On this issue it is noted:

- a) Most medical authorities on headache have been trained as neurologists and do not have the skills or desire to examine and investigate the neck. Therefore they continue to limit their investigations to intra-cranial causes for headache.
- b) Traditionally, and still today, mainstream medical opinion is that the great majority of headache is migraine or tension-type headache. Patients require medication. Because these forms of headache do not involve the structures of the neck or cervical spine, there is no consideration of referral to a chiropractor for specialized assessment and treatment of restricted function of cervical joints and muscles.
- c) In the major medical reclassification of headache by the International Headache Society in 1988³ there was finally recognition of a category titled *cervicogenic headache* for headaches arising from the cervical spine. How-

Figure 1 Posterior View of Cervical Spine

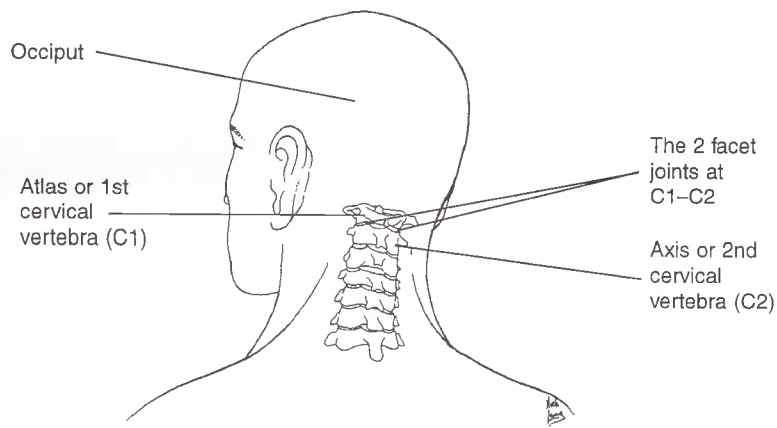
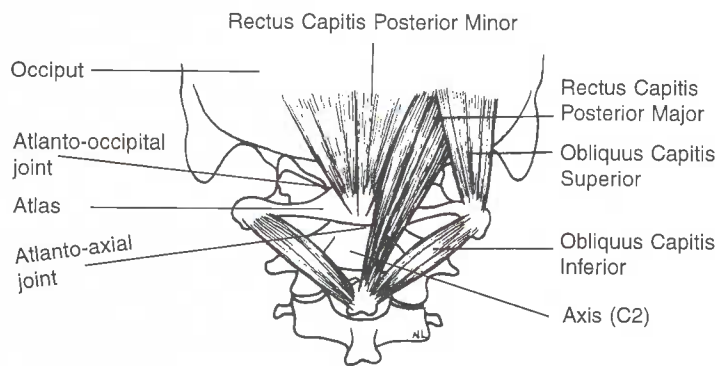


Figure 2 Posterior View of Suboccipital Muscles



Adapted from *Chiropractic Technique* (1993) eds. Bergmann TF, Peterson DH and Lawrence DJ.

ever, this was narrowly defined, and regarded as separate from and much less common than tension and migraine headaches.

d) Chiropractors challenge the IHS position, and so does a large and growing body of medical experts. Leaders amongst them established the North American Cervicogenic Headache Society in September 1995 because the cause of headache is often uncertain, medical treatment was largely empirical, there was now good evidence implicating the cervical spine in headache, this had important ramifications for appropriate approaches to treatment, and a new society was needed "to continue the study of how neck pathology can cause headaches, so that ultimately this information becomes integrated into the mainstream of headache etiology and treatment."⁴

The NACHS Board is led by Peter

Rothbart MD, a Canadian anaesthesiologist and pain management specialist, President, and Horst Blume MD PHD, a US neurologist from South Dakota. International Board members include Nikolai Bogduk MD PHD from Australia, C. Saunte MD from Norway and A. Kuritzky MD from Israel. Chiropractic board members are Scott Haldeman DC MD PHD from California, and Howard Vernon DC from Canada. Importantly, the NACHS has adopted the following much wider definition of cervicogenic headache:

"Referred pain perceived in any region of the head caused by a primary nociceptive source in the musculoskeletal tissues innervated by cervical nerves."⁴

This definition, on the evidence of current research, is wide enough to capture many patients currently treated medically as having migraine or tension-type

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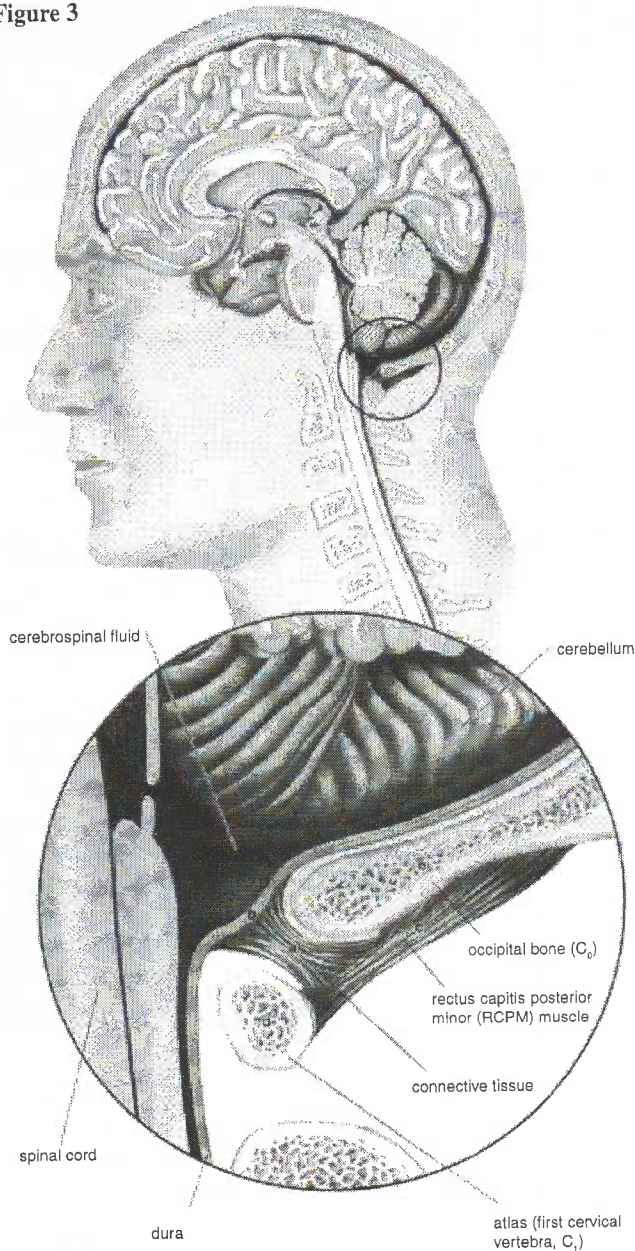
headaches.

e) Randomized controlled trials of chiropractic management are now documenting the benefits of chiropractic adjustment or manipulation for patients with cervicogenic,⁵ tension-type,^{6,7} and migraine headache.^{8,9} A recent study in Denmark by Niels Nilsson DC MD PHD, a researcher with basic science, chiropractic and medical qualifications who specializes in this field, reports that cervicogenic headache - even on the narrow IHS definition - is as prevalent or common in the general population as migraine.¹⁰

(For a full discussion of chiropractic management of patients with headache, and the integration of chiropractic and medical management, see the May 1995 issue of this Report (Vol 9 #3)).

f) Another major line of recent clinical research demonstrating the link between the cervical spine and headache comes from medical researchers led by Nikolai Bogduk MD PHD and Susan Lord MD at

Figure 3



Reprinted from *The Anatomist's New Tools*, Hack DG, Dunn G et al (1997) 1998 Medical and Health Annual.

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the Cervical Spine Research Unit, University of Newcastle, Australia. In a recent trial published in *Spine*¹¹ and described in editorial comment as "rigorous and impeccable" they used sophisticated injection techniques to demonstrate that the exact source of headache and neck pain in 60% of 68 patients chronically disabled by whiplash injuries was the facet joints in the cervical spine. (See Figures 1 and 2). They note that:

- "Few medical practitioners recognize the entity of cervical zygapophyseal joint (*i.e. facet joint*) pain."
- The evidence from the past 10 years is now "compelling" that cervical facet joint pain is "extraordinarily common" and that this diagnostic entity and cause of pain "cannot be ignored" any longer.

(For a detailed review of this trial see the November 1996 issue of this Report (Vol 2 #6)).

g) Correcting restricted movement of spinal facet joints is a principal target of chiropractic adjustment or manipulation. If cervical spine facets, which are richly innervated with pain fibers (the medial branches of the cervical dorsal rami), are an important source of headache, how is that pain referred from them to the head? What structures are involved? The new discovery of myodural bridges in the upper cervical spine is important in answering those questions.

B. THE NEW DISCOVERY

3. Hack et al had their first discovery published in *Spine* in late 1995¹ and reported:

a) In dissections of 11 cadavers they found a connective tissue bridge joining the rectus capitis posterior minor (RCPM) muscle and the dura mater between the occiput and atlas - *i.e.* at the atlanto-occipital joint which is the first joint at the top of the spine. (See Figures 2 and 3).

b) The fibers of this connective tissue bridge are oriented perpendicular to the dura and muscle. They suggested that this myodural bridge assists in preventing infolding of the dura, which is very pain sensitive and protective of the spinal cord, during neck extension.

Hack et al's initial purpose in having their paper published in *Spine* was to warn surgeons so they could "avoid the potential risk of dural damage" during surgery.

4. California neurologist and chiropractor Scott Haldeman DC MD PHD, invited by *Spine* to contribute a *Point of View* immediately following the paper, noted that "another potentially important extrapolation of this finding is in the understanding of so-called cervical muscle contraction or sub-occipital headaches."¹² Haldeman pointed to the growing body of literature relating headaches to the cervical spine and evidencing the value of treatments such as massage, manipulation and biofeedback for management of various forms of headache. He then explained that "the present report that muscles may have a direct influence (*via the newly discovered connective tissue bridge*) on the dura mater, a pain sensitive structure, suggests an alternative mechanism for pain generation for cervical headaches."

Haldeman noted the need for confirmation of this new discovery, including observation in live patients undergoing surgery -

NORTH AMERICA

continued from page 1

about the profession and practice of chiropractic.

In their foreword, editors Daniel C. Cherkin PhD of Seattle, Washington and Robert D. Mootz DC of Olympia, Washington note:

- “. . . Almost exactly 100 years after D.D. Palmer’s legendary success using spinal manipulation, this technique and the profession most closely associated with its use, chiropractic, have gained a legitimacy within the United States health care system that until very recently seemed unimaginable.”
- “Because of the rapidity of the changes in how spinal manipulation and chiropractic are viewed . . . the majority of medical doctors have had little interaction with chiropractors and know very little about them . . . this monograph attempts to provide an unbiased overview of what is and is not known about the profession and practice of chiropractic.”

Chapters include:

- A Brief History of Chiropractic - *Reed B. Phillips, DC PhD*
- Chiropractic Belief Systems - *Mootz and Phillips*
- Chiropractic Training - *Ian D. Coulter, PhD, Alan H. Adams DC et al.*
- Supply, Distribution and Utilization of Chiropractors in the United States - *Coulter and Paul G. Shekelle, MD PhD.*
- Licensure and Legal Scope of Practice - *Ruth Sandefur, DC PhD and Coulter.*
- Insurance Coverage of Chiropractic Services - *Gail A. Jensen PhD, Mootz, Shekelle and Cherkin.*
- Chiropractic in the Health Care System - *Mootz, William C. Meeker, DC MPH and Cheryl Hawk DC PhD.*
- Content of Practice - *Mootz and Shekelle.*
- Chiropractic Research - *Phillips, Adams and Sandefur.*
- Biological Rationale for Benefits of Spinal Manipulation - *Howard T. Vernon DC.*
- Benefits and Risks of Spinal Manipulation - *Shekelle, Phillips, Cherkin, and Meeker.*
- Synopsis, Research Priorities and Policy Issues - *Cherkin and Mootz.*

Most chiropractors will want to order, read and use this work. Firstly there is a rich inventory of information. Secondly there is an interesting balance of chiropractic and medical perspectives - the draft final text was reviewed by prominent physicians from other disciplines such as Peter Curtis MD, Richard Deyo MD MPH and James Weinstein DO MPH, editor of *Spine*. In their chapter titled *Chiropractic in the Health Care System*, Mootz, Meeker and Hawk note that chiropractic occupies a unique position in the US health care system. It is “the most widely disseminated indigenous American system of healing and the most frequently used type of alternative health care in the United States”, but members of the

chiropractic profession itself and the medical profession and third party payors all have different perspectives on the role of chiropractic. They note that a key future issue is substantial agreement among the various constituencies on what this role is. Is it:

- limited musculoskeletal specialists on interdisciplinary primary health care teams
- primary health care gatekeepers focusing on ambulatory musculoskeletal complaints
- generalist primary health care providers of “alternative/complementary” medicine, managing or co-managing more than just musculoskeletal problems.

They conclude that at present chiropractic is both *alternative* (in that it approaches health care from a distinctly different perspective than that of the dominant health care profession, medicine) and *mainstream* (in that it has gained popular acceptance). Reed Phillips DC PhD concludes his excellent brief chapter on the history of chiropractic with the comment:

“It has taken 100 years of self-directed, bootstrap efforts utilizing internal funds to bring chiropractic into the mainstream of health care. As a mainstream provider, the issues of role and scope of practice are now receiving serious attention. Is chiropractic an alternative to medicine? Is there a complementary role that includes collaborative care? Should chiropractic remain a separate and distinct profession or seek inclusion into medicine as a subspecialty in musculoskeletal conditions? Should chiropractic education seek affiliation with major universities housing medical education? Answers to these questions will have a significant effect on the future of chiropractic education and practice.”

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2. Canada - Research Consortium Announced

In November 1996 a Canadian Chiropractic Association Task Force on Chiropractic Research in Canada recommended an improved infrastructure for research - better organization, human resources, priorities, and funding.

One important and impressive step now taken has been the first formal interdisciplinary Consortium for Chiropractic Research in Canada. Participating institutions include both chiropractic colleges (Canadian Memorial Chiropractic College, Toronto and the Chiropractic Program, University of Quebec, Trois Rivieres), the Universities of Alberta, Saskatchewan, Waterloo and York, and the Institute of Work and Health, Toronto.

EUROPE

1. Belgium - Legislation Imminent. This is the 75th anniversary of chiropractic in Belgium, with chiropractic having been introduced by the Gillet family in 1923. Although there is still no law recognizing the practice of chiropractic - or osteopathy or physical therapy as a matter of interest - the Minister of Health signed a Declaration of Intent to enact chiropractic legislation in 1995.

After extensive lobbying during the past two years by the Union of Belgian Chiropractors led by President Dr. Philippe Druart, draft chiropractic legislation (known in Belgium as a 'proposition of law') is before the government and expected to pass soon.

Belgium's chiropractors are graduates of duly accredited colleges. By contrast the osteopathic profession has an education based on 4-5 weekends per year for four years and their recent proposition of law has been refused by the government. Political progress in Belgium is complicated by the fact that there are two languages, many political parties, strong regional rivalries and there is a change of government approximately every two years.

2. Italy - Update: Italy, which hosts the European Chiropractors' Union annual convention this month in St. Vincent, Aosta Valley, saw the late but sudden introduction of chiropractic services in 1960 when a group of businessmen which included two chiropractors and two medical doctors started 24 Static Clinics in which chiropractic services were provided under medical prescription.

Today Italy has approximately 200 chiropractors, 120 of whom belong to the Associazione Italiana Chiropratici. Most DCs are from abroad - only 16 are Italians by birth.

Draft legislation, sponsored by 130 of the 500 deputies in the Italian Parliament, is before the Social Affairs Committee. Although the practice of chiropractic is technically in breach of medical law there has been no threat of prosecutions for many years and chiropractic has a good reputation in the country.

3. Research. Guidelines Can be Helpful. In 1994, government-sponsored multidisciplinary UK guidelines for the management of patients with low-back pain recommended manipulation, and said that this service was provided by chiropractors, osteopaths and physiotherapists. As a result the British Chiropractic Association approached the Wiltshire Health Authority, a government funded regional health authority, and received funding for clinical services in a pilot study to see if there were benefits if general medical practitioners (GPs) acted in accordance with the new guidelines. The study, just published, is of considerable interest:

- It compared a retrospective group of 194 patients treated in 11 GP practices between July and October 1995 and a prospective group of 344 patients treated in the same practices from November 1995 to March 1996 - the difference was that funding was available for 'manipulation services' in accordance with the UK guidelines during the second period.
- There was a major shift in medical referral patterns. In the retrospective group only 2% (2% to chiropractors and 0% to osteopaths) of back pain patients were referred for manipulation, while in the prospective group 53% (28% to chiropractors and 25% to osteopaths) were referred. Physiotherapy referrals went down from 72% to 21%.
- Results of this "substantial shift of referrals to manipulation practitioners" included fewer referrals to secondary care; fewer GP consultations; less drug use; and fewer certified sickness days - "demonstrable savings in sickness incapacity benefits were evident."

There are plans for a fully funded comparative study which includes chronic pain patients. Lead BCA researcher in this study, Dr. Alan Breen, has now received government funding through the Royal College of General Practitioners for a major audit program designed to convert all British GPs to acceptance and use of the new guidelines for management of back pain patients.

(Scheurmier N, Breen AC (1998) *A Pilot Study of the Purchase of Manipulation Services for Acute Low Back Pain in the United Kingdom*, J Manipulative Physiol Ther 21(1):14-18.)

Adolescent Low-Back Pain: Researchers from Odense University, Denmark, led by chiropractic researcher Charlotte Leboeuf-Yde DC MPH PHD have just presented the best evidence yet that low-back pain is a common adolescent problem, so much that "it would be wise to concentrate more of the research into causality and prevention on non-adults".

Their new Danish survey published in *Spine* had good size (29,424 persons) and response rate (86%) and found that the steepest increase in the first episode of back pain for adolescent girls and boys was in the ages 12-14, and that over 50% of young women had had back pain by age 18 and young men by age 20.

(Leboeuf-Yde C, Kyvik KO (1998) *At What Age Does Low Back Pain Become a Common Problem? A Study of 29,424 Individuals Aged 12-41 Years*, *Spine* 23(2):228-234.)

ASIA/PACIFIC

1. WFC Conference on Chiropractic Education - The Philippines De La Salle University, Manila is the site of a major three day conference on international developments in chiropractic education from September 29 to October 2, 1998. The meeting will look at innovative approaches to curriculum in various countries at both the undergraduate and postgraduate levels - including self-study using the internet and other distance learning technologies. These changes in chiropractic education reflect wider changes being seen also in other professions.

Co-directors of the conference are Professor Andries Kleynhans, RMIT University, Melbourne, Australia and Professor Alan Adams, LACC, Los Angeles, USA. The meeting will be co-sponsored by the World Federation of Chiropractic, the WHO Western Pacific Regional Office, RMIT University and De La Salle University, which is in negotiations with RMIT to commence a chiropractic school in The Philippines.

2. 1999 World Chiropractic Congress - Auckland, New Zealand: The World Federation of Chiropractic's 1999 World Chiropractic Congress will be held in the City of Sails, Auckland, New Zealand, May 20-22, 1999 and is your tax deductible ticket to the South Pacific. The scientific program is titled *Traditional and New Approaches to Chiropractic Practice* and features lectures, technique workshops and technique seminars by expert faculty. See notice on pg. 6 for details. There were 1800 at the 1997 Congress in Tokyo - plan to experience your profession at its best in New Zealand next year.

both now done - and the need for biomechanical studies confirming that contraction of the RCPM muscle does exert force on the dura

5. The first letter to the editor published by *Spine* came from Taylor et al in Australia¹³ and explained that Hack et al's discovery threw light on their observation from more than 200 cervical spine dissections that the "posterior cervical dura is much thicker than the anterior cervical dura", with this difference "most marked on the C1-C3 region." Hack et al had given them a mechanical explanation for this, namely that "the tension on the upper posterior cervical dura from the muscle contraction results in its thickening."

In their published response¹⁴ Hack et al reported two important new developments:

a) "Multiple reports of the connective tissue bridge being observed in patients undergoing craniocervical surgery."

b) That their ongoing further study of cadavers had shown a similar myodural bridge at the second joint in the cervical spine, the atlanto-axial joint (C1-C2). This second bridge of connective tissue linked the dura to different muscles - the rectus capitis posterior major and the obliquus capitis inferior. (See Figure 2).

6. The next letter published in *Spine*, a year later, came from Dutch researchers Rutten et al¹⁵ and, apart from confirming Hack et al's initial discovery, noted additional connective tissue and ligamentous connections between the dura mater and the spine itself. Specifically, they noted:

a) On 7 cadavers they had confirmed the myodural connective tissue bridge at the atlanto-occipital joint.

b) In addition they had found connective tissue strands between the dura mater and the posterior wall of the vertebral canal, specifically attachments between the dura and:

i) The posterior arch of the atlas

ii) The ligamenta flava between C1-C2 and C2-C3

c) Early research by Von Lanz in 1929 described fibrous strands of the CDMS ligament (ligamentum craniale durae matris spinalis) between the dura mater and the posterior border of the atlanto-

occipital joints, the edge of the foramen magnum, the posterior arch of the atlas, and the arch of the axis.

"Our microscopic dissections shows that the CDMS ligamentous strands are stronger than the RCPM connective tissue fibres (i.e. the new bridge found by Hack et al) at the atlanto-occipital joint."

"Parts of the CDMS ligament (the median fibres included) may tense during movements of the upper cervical spine. The CDMS ligament may have similar mechanical importance as does the RCPM."

7. In their response to Rutten et al's letter,¹⁶ Hack et al suggest this additional description of the function of the RCPM muscle:

a) "To provide static and dynamic proprioceptive feedback to the central nervous system, monitoring movement of the head and influencing movement of the surrounding musculature by way of this connective tissue bridge."

b) Importantly they also report that there is now MRI evidence that the RCPM undergoes fatty degeneration (atrophic change) in patients with whiplash symptoms. Accordingly trauma can weaken and change the structure of the RCPM "potentially leading to failure of the anti-folding mechanism."

8. What is apparent from a chiropractic perspective is that these changes in *structure* that are reported - in the muscle and in the thickness of the posterior dura for example - are responses to prior change in *function*. For the patient this means that effective management must address *functional pathology* as soon as possible, because this precedes *structural pathology*.

9. The most recent publication by Hack et al on their research, this time written for the general public, appears in the 1998 *Medical and Health Annual* published by Encyclopaedia Britannica.² Readers may wish to order a reprint of this paper because of its superb colour illustrations. See ordering details on page 3.

Additional information from this paper includes:

a) The reason why the first new muscle-dura (myodural) bridge of connective tissue was found, was that dissection was

1999 World Chiropractic Congress

May 20-22, 1999, Auckland, New Zealand

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Day 3

The NZ Commission of Inquiry into Chiropractic - 20 Years On

- Memories, Questions and Conclusions concerning the historic NZ Commission. Session features many of the leading personalities including his Honour Judge B. Donald Inglis, Chairman, NZ Commission of Inquiry.

Integration of Chiropractic, Complementary and Medical Care

- Case Example: China - Xiaorui Zhang MD, China and WHO
- Case Study: United States - William Meeker DC MPH - USA
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Maria Patino

1999 Congress, World Federation of Chiropractic
78 Glencairn Avenue

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Tel: 416-484-9601 Fax: 416-484-9665

E-mail: worldfed@sympatico.ca

performed from the side. The conventional approach in the laboratory and surgery is to make the incision in the back of the neck and the connective tissue is not visible from that angle.

b) The way in which the second bridge at the second joint (C1-C2) was found is even more interesting. The US National Library of Medicine in Washington DC has a Visible Human Project (VHP). Cadavers from 'ideal' male and female specimens were frozen and then cut head to toe into thousands of transverse slices. Each frozen slice (cryosection) was photographed and the images digitally transferred to a computer. These images can be presented in their original cross-section form or can be reformatted and viewed in a variety of different planes and three dimensional images. The images can then be rotated in various directions.

These VHP 'virtual cadavers' provide amazing new journeys into human anatomy. Hack et al used the VHP model to confirm their first finding. Then they thought to use the images to explore for a similar connective tissue bridge at the next joint in the upper cervical spine. The bridge was there on the VHP images - they then returned to the laboratory and verified it on dissection.

c) The researchers confirm that sustained contraction of head and neck muscles is known to produce pain experienced inside the head (tension headache), ask by what mechanism this contraction of muscles *outside* the skull produces pain *inside* the skull, and postulate that their new finding may represent "the missing link that scientists have long sought to explain the pain of so-called muscle contraction (tension) headaches."

"Neurosurgeons describe the brain as insensitive. It is known, however, that the covering of the brain, the dura, is extremely sensitive, and tension on the dura during neurosurgical procedures can produce pain experienced as headache."

"While the notion that headache may arise from cervical (neck) structures may be new to some medical practitioners, it is a concept that is widely accepted by chiropractors, osteopaths, and other professionals who regularly perform manipulative procedures involving the cervical spine."

d) Finally it should be noted that the most recent article reports a second major discovery by Hack et al - a fifth muscle group used for mastication or chewing and named the *sphenomandibularis muscle*. (This muscle, previously thought to be part of the temporalis muscle, has insertions on the sphenoid bone and the mandible).

C. CONCLUSION

10. Medical treatment of headache remains largely empirical, which is simply an elegant way of saying that the cause of pain is frequently obscure, undiagnosed, and unknown. Norwegian neurologist Otter Sjaastad MD describes the diagnostic confusion as "grave".¹⁷ US neurologist Joel Saper explains that "the exact pathogenesis of migraine has yet to be established as differing views are held by a number of credible authorities."¹⁸

Many medical researchers believe that headache is primarily caused by changes in brain chemistry that result in a lowering in the threshold at which pain is perceived. Chiropractors and others with a specialized understanding of the function of the cervical spine, now joined by an increasing number of medical specialists, argue that functional pathology in structures of the neck frequently plays a major role. Obviously there are many lifestyle and behavioural factors.

The newly discovered connective tissue and ligamentous bridges between the dura and the muscles and spine in the upper cervical spine now provide a clear physical link between headache and movement restriction or functional pathology in the cervical spine.

11. Finally, a word on terminology. In working with patients, medical doctors and others, what name should chiropractors now give to the headaches they manage? There are many problems.

Firstly much *tension-type* and *migraine* headache, as defined by the IHS, is now known to be caused fully or partly by functional pathology of the cervical spine. Secondly, however, *cervicogenic headache* is defined narrowly by the IHS and excludes tension-type and migraine headache. Thirdly the IHS definitions were intended for research not clinical practice. Fourthly chiropractors, as with each professional group, have their profession-specific terms (e.g. subluxation-

based headache, vertebrogenic headache).

Ideally any description used by chiropractors should identify the cervical spine as a source of pain, be acceptable across disciplines, and have a clear definition. Two possibilities come to mind:

• **CSD Headache.** Headache from cervical spine dysfunction (CSD headache) has the benefit of being distinct and clear. It can be used to include various common forms of headache such as tension headache and migraine wherever functional pathology in the spine is a causative factor.

• **Cervicogenic Headache.** The term *cervicogenic headache* (CG headache) has the advantage of brevity and current usage. Its disadvantage is some confusion as to definition. However it can be used appropriately and with confidence if linked to the NACHS definition given in para 2 (d) above, namely:

"Referred pain perceived in any region of the head caused by a primary nociceptive source in the musculoskeletal tissues innervated by cervical nerves." **TCR**

Note: Dr. Gary Hack will be speaking at the FCER's 1998 International Conference on Spinal Manipulation, July 16-19, 1998, Vancouver, Canada. So will Dr. Peter Rothbart, President, NACHS. For registration information contact the Foundation for Chiropractic Education and Research, Tel. 800-622-6309, 515-282-7118, Fax. 515-282-3347, P.O. Box 4689, Des Moines, IA 50306, U.S.A.

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Does Reading of *The Chiropractic Report* Actually Change Professional Behaviour?

The answer for most chiropractors is yes according to a new survey. During 1996 and 1997 the American Chiropractic Network (ACN), a national preferred provider network, gave gift subscriptions to 412 network members in Minnesota. This was a pilot project to test whether these chiropractors - who had not chosen to read the Report but were sent it without charge - would firstly read the Report and secondly change their professional behaviour as a result.

In an ACN/TCR survey just completed:

- 126 questionnaires were returned from the survey population of 412, a good response rate of 31%. 19 respondents (15%) had been in practice for 1-5 years, 25 (19%) for 6-10 years and 82 (65%) for more than 10 years.
- 92% found the Report valuable for their day-to-day practice. 6% reported they found it of little value, but there were indications these were people who had not taken time to read it. One respondent, for example, commented frankly "to be honest I haven't really read many of your reports".
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- "Started using your whole list of LB exercises instead of my old favourites".
- "Tx protocols are helpful and have influenced rehab protocol in my office".
- "Changes in how I approach the issue of cervical adjusting and patient risk".
- "Use of information on PT vs DC vs cortisone injection in shoulder pain".
- "Can show patient actual fact to what I am saying - manipulation helps, here is why, etc."
- "Better record keeping".
- "Explanation for continued pain post-whiplash".
- "The use of outcome assessment tools (VAS, NDI, Oswestry, etc)".
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