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RELIEF OF DEPRESSION AND IMPROVEMENT IN GLOBAL WELL-BEING IN AN ELDERLY CHIROPRACTIC PATIENT

Objective: To describe the case of a patient with depressive symptoms which improved while under chiropractic care for low back pain, and to discuss the clinical features of depression, including screening.

Clinical features: A 71-year-old female with low back pain sought chiropractic care. Her initial score on the Beck Depression Inventory (BDI) was 8. In addition to the BDI, the Global Well-Being Scale (GWBS) and Visual Analog Scale (VAS) for pain were administered at intervals during her care.

Intervention and outcome: The patient was treated with flexion-distraction chiropractic technique, moist hot packs, and interferential current to the lumbar spine a total of 11 times over 11 weeks. The BDI was administered at baseline and again three times during care. Her BDI scores went from 8 (indicating moderate depression) to 4 (indicating no or minimal depression) to 0 during her care.

Conclusion: While non-musculoskeletal complaints as a chief complaint make up a small percentage of chiropractic practice, chiropractors see large numbers of patients with low back pain and depression. There is scant literature about the effect of chiropractic care as a treatment for depression. There are reports of other CAM treatments for patients with depression as well as reports of depression screening and awareness in chiropractic practice. This patient's depression and global well-being (see figures 3. and 1. below) improved while under chiropractic care for her low back pain. This may have been due to a variety of factors, such as natural progression, therapeutic effect of touch, patient–doctor interaction, or improvement secondary to the improvement of her back pain.

Reference:

Rowell RM, et al. *Relief of depressive symptoms in an elderly patient with low back pain.* Clinical Chiropractic 2005 (Article in Press) intl.elsevierhealth.com/journals/clch

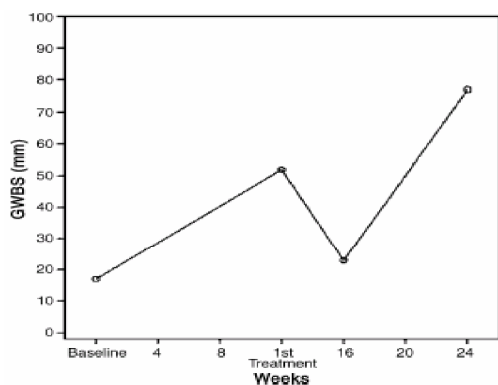


Figure 3 Global Well-Being Scale (GWBS) measurements at baseline, first treatment, and 16- and 24-week follow-up. The GWBS is a 100 mm line anchored with 0 = worst you could possibly feel and 100 = best you could possibly feel.

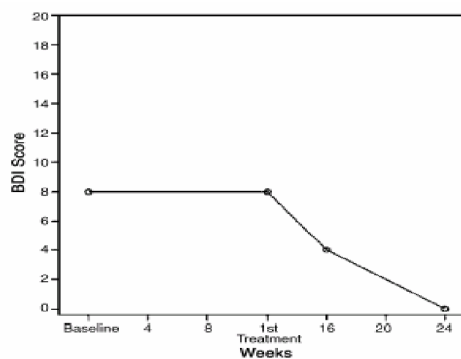


Figure 1 Beck Depression Inventory (BDI) scores at baseline, first treatment, and 16- and 24-week follow-up. The BDI is a 13 item questionnaire with a score of 0–4 indicating none or minimal depression; 5–7 mild depression; 8–15 moderate depression; and 16 or greater indicating severe depression.

SHORT-TERM EFFECTS OF SPINAL MANIPULATION ON H-REFLEX AMPLITUDE IN HEALTHY AND SYMPTOMATIC SUBJECTS

Objectives - The purpose of this study is to assess Hoffman (H) reflex after spinal manipulation (1) as a function of experimental position in healthy subjects and (2) in patients with low back pain.

Methods - An intervention study was performed to evaluate the effects of sacroiliac (SI) joint manipulation on motoneuron excitability, as measured by the H-reflex. Manual treatment of the SI joint was performed. Hoffman reflex amplitudes before and after SI joint manipulations were measured with subjects lying on the right side (n = 12 healthy subject) or with subjects lying supine (n = 5 healthy subjects), which required turning of subjects onto their sides for SI joint manipulation. Hoffman reflex amplitudes were also measured in 15 patients with low back pain.

Results - No significant changes in H-reflex amplitude in healthy subjects receiving manipulation to the SI joint were observed, provided that H-reflex testing and treatments were performed in the same position, that is, the subject was not moved during the experimental procedure. However, changes in motoneuron excitability after SI joint manipulation were observed in patients with low back pain.

Conclusions - It appears that H-reflex responses after spinal manipulation are sensitive to movement/repositioning, and that the H-reflex depressions after manipulation documented in previous studies were movement artifacts rather than treatment effects. The relationship between etiology of low back pain and changes in H-reflex amplitude after spinal manipulation is not clear and needs further investigation.

Reference:

Suter E, McMorland G, Hertzog W. *Short-term effects of spinal manipulation on H-reflex amplitude in healthy and symptomatic subjects.* JMPT 2005;28:667-72.

A COCHRANE REVIEW OF ELECTROTHERAPY FOR MECHANICAL NECK DISORDERS

Study Design - Systematic review.

Objective: To assess whether electrotherapy relieves pain or improves function/disability in adults with mechanical neck disorders (MND).

Summary of Background Data - The effectiveness of electrotherapy as a physiotherapy option has remained unclear.

Methods - Databases were searched from root to March 2003. Independent reviewers conducted selection, data abstraction, and quality assessment. Relative risk and standard mean differences were calculated.

Results - Fourteen comparisons were included. For the pain outcome, we found limited evidence of benefit, ie, pulsed electromagnetic field (PEMF) therapy resulted in only immediate post-treatment pain relief for chronic MND and acute whiplash (WAD).

Other findings included unclear or conflicting evidence (Galvanic current for acute or chronic occipital headache; iontophoresis for acute, subacute WAD; TENS for acute WAD, chronic MND; PEMF for medium- or long-term effects in acute WAD, chronic MND);

and limited evidence of no benefit (diadynamic current for reduction of trigger point tenderness in chronic MND, cervicogenic headache; permanent magnets for chronic MND; electrical muscle stimulation (EMS) for chronic MND).

Conclusions - In pain as well as other outcomes, the evidence for treatment of acute or chronic mechanical neck disorders by different forms of electrotherapy is either lacking, limited, or conflicting.

Reference:

Kroeling P, et al. *A Cochrane Review of Electrotherapy for Mechanical Neck Disorders.* Spine 2005; 30:E641-E648.

THE USE OF CHIROPRACTIC AMONG CALIFORNIAN ADULTS WITH AND WITHOUT CANCER

Complementary and alternative medicine (CAM) plays a significant role in the American health care scene. A number of nation-wide studies employing probability samples have found that between 40-45% of the adult population has used CAM to deal with a health problem over the past 12 months (1-3). The most recent report based on a large national probability sample found that 62% of Americans had used CAM in the past year, although this figure dropped to 36% if prayer was excluded from the definition of CAM (4). Research done on clinic or non-representative convenience samples has found that CAM use is common (50-100%) among those who suffer from chronic problems (5).

This article (6) examines the extent and correlates of complementary and alternative medicine (CAM) use among a population-based sample of California adults that is highly diverse in terms of sociodemographic characteristics and health status.

As a follow-up to a state-wide health survey of 55 428 people, 9187 respondents were interviewed by phone regarding their use of 11 different types of CAM providers, special diets, dietary supplements, mind-body interventions, self-prayer and support groups.

The sample included all participants in the initial survey who reported a diagnosis of cancer, all the nonwhite respondents, as well as a random sample of all the white respondents. The relation of CAM use to the respondents' demographic characteristics and health status is assessed.

CAM use among Californians is generally high, and the demographic factors associated with high rates of CAM use are the same in California as have been found in other studies. Those reporting a diagnosis of cancer and those who report other chronic health problems indicate a similar level of visits to CAM providers. However, those with cancer are less likely to report using special diets, and more likely to report using support groups and prayer. Health status, gender, ethnicity and education have an independent impact upon CAM use among those who are healthy as well as those who report suffering from chronic health problems, although the precise relation varies by the type of CAM used.

References:

1. Eisenberg DM, Davis RB, Ettner SL, Appel MS, Wilkey S, Van Rompay M, Kessler RC. Trends in alternative medicine use in the United States, 1990-1997: results of a follow-up national survey *J Am Med Assoc* 1998; 280: 1569-75.
2. Ni H, Simile C, Hardy AM. Utilization of complementary and alternative medicine by United States adults: results from the 1999 National Health Interview Survey *Med Care* 2002; 40: 353-8.
3. Wooten JC and Sparber A. surveys of complementary and alternative medicine: part I: general trends and demographic groups *J Altern Complement Med* 2001; 7: 195-208.
4. Barnes PM, Powell-Griner E, McFann K, Nahin RL. Complementary and alternative medicine use among adults: United States, 2002 *Adv Data* 2004; 343: 1-9.
5. Ai AA and Bolling SF. The use of complementary and alternative therapies among middle-aged and older cardiac patients *Am J Med Qual* 2002; 17: 21-7.
6. Goldstein MS, et al. The Use of Complementary and Alternative Medicine Among California Adults With and Without Cancer 2005; 2:557-65.
<http://ecam.oxfordjournals.org/cgi/content/abstract/2/4/557>

The use of selected CAM providers in California (CHIS-CAM) (unweighted *n*, weighted %)

CAM provider	Ever use CHIS- CAM		Past 12 months CHIS-	
	<i>N</i>	%	CAM <i>n</i>	%
Chiropractor	3550	36.0	1159	13.0
Massage therapist	2208	23.4	1246	14.2
Acupuncturist	1183	10.5	319	3.0
Traditional Chinese medicine	464	3.9	179	1.5
Osteopath	463	4.8	99	1.1
Curandero	109	1.2	34	0.3
Naturopath	253	2.4	84	1.1
Homeopath	412	3.8	106	0.9
Native American healer	155	0.7	45	0.1
Ayurvedic	71	0.7	23	0.2
Reiki practitioner	215	1.9	91	1.0
Any provider	4710	49.1	2275	25.0
Two or more providers	2397	23.4	782	8.1
Three or more providers	1018	9.3	243	2.5

AN RCT OF MANUAL VERSUS MECHANICAL FORCE MANIPULATION FOR SACROILIAC JOINT SYNDROME

Objectives - To investigate the effect of instrument-delivered compared with traditional manual-delivered thrust chiropractic adjustments in the treatment of sacroiliac joint syndrome.

Methods - Prospective, randomized, comparative clinical trial. Sixty patients with sacroiliac syndrome were randomized into two groups of 30 subjects. Each subject received 4 chiropractic adjustments over a 2-week period and was evaluated at 1-week follow-up. One group received side-posture, high-velocity, low-amplitude chiropractic adjustments; the other group received mechanical-force, manually-assisted chiropractic adjustments using an Activator Adjusting Instrument (Activator Methods International, Ltd, Phoenix, Ariz).

Results - No significant differences between groups were noted at the initial consultation for any of the outcome variables. Statistically significant improvements were observed in both groups from the first to third, third to fifth, and first to fifth consultations for improvements ($P < .001$) in mean numerical pain rating scale 101 (group 1, 49.1-23.4; group 2, 48.9-22.5), revised Oswestry Low Back Pain Disability Questionnaire (group 1, 37.4-18.5; group 2, 36.6-15.1), orthopedic rating score (group 1, 7.6-0.6; group 2, 7.5-0.8), and algometry measures (group 1, 4.8-6.5; group 2, 5.0-6.8) for first to last visit for both groups.

Conclusions - The results indicate that a short regimen of either mechanical-force, manually-assisted or high-velocity, low-amplitude chiropractic adjustments were associated with a beneficial effect of a reduction in pain and disability in patients diagnosed with sacroiliac joint syndrome. Neither mechanical- force, manually-assisted nor high-velocity, low-amplitude adjustments were found to be more effective than the other in the treatment of this patient population.

Reference:

Shearar KA, Colloca CJ, White HL. *A randomized clinical trial of manual versus mechanical force manipulation in the treatment of sacroiliac joint syndrome.* J Manipulative Physiol Ther. 2005; 28:493-501.

PERSISTENT BACK PAIN - A MIXED METHODS STUDY OF CHIROPRACTORS, OSTEOPATHS AND PHYSIOTHERAPISTS

Aims - (a) To investigate how widespread is the use of long term treatment without improvement amongst clinicians treating individuals with low back pain.
(b) To study the beliefs behind the reasons why chiropractors, osteopaths and PT's continue to treat patients with LBP that appear not to be improving.

Methods - A mixed methods study, including a questionnaire survey and qualitative analysis of semi- structured interviews. Questionnaire survey; 354/600 (59%) clinicians equally distributed between chiropractic, osteopathy and physiotherapy professions. Interview study; a purposive sample of fourteen clinicians from each profession identified from the survey responses. Methodological techniques ranged from grounded theory analysis to sorting of categories by both the research team and the subjects themselves.

Results - At least 10% of each of the professions reported that they continued to treat patients with low back pain who showed almost no improvement for over three months. There is some indication that this is an underestimate. Reasons for continuing unsuccessful management of low back pain were not found to be primarily monetary in nature; rather it appears to have much more to do with the scope of care that extends beyond issues addressed in the current guidelines. The interview data showed that clinicians viewed their role as including health education and counseling rather than a 'cure or refer' approach. Additionally, participants raised concerns that discharging patients from their care meant sending them to into a therapeutic void.

In concluding it is stated, "Long-term treatment of patients with low back pain without objective signs of improvement is an established practice in a minority of clinicians studied. This approach contrasts with clinical guidelines that encourage self-management, reassurance, re-activation, and involvement of multidisciplinary teams for patients who do not recover. Some of the rationale provided makes a strong case for ongoing contact."

However, the authors also conclude that,

"...the practice is maintained through poor communication with other professions and mistrust of the healthcare system".

ASRF Update Editor's comment - It is more than a little disconcerting that the authors of this paper, originally accepted as a poster presentation at the .. , choose to refer to chiropractors as just on of a number of 'physical therapy clinicians' - See title of original article below.

Reference:

Pincus T, Vogel S, Breen A, Foster N, Underwood M. *Persistent back pain - why do physical therapy clinicians continue treatment? A mixed methods study of chiropractors, osteopaths and physiotherapists*. Eur J Pain. 2006; 10:67-76.

RISK OF ADVERSE GASTROINTESTINAL OUTCOMES IN PATIENTS TAKING CYCLO-OXYGENASE-2 INHIBITORS OR CONVENTIONAL NSAIDS

Objective - To determine the risk of an adverse upper gastrointestinal event in patients taking different cyclo-oxygenase-2 inhibitors compared with non-selective non-steroidal anti-inflammatory drugs.

Design - Nested case-control study.

Setting - 367 general practices contributing to the UK QRESEARCH database, spread throughout every strategic health authority and each health board in England, Wales, and Scotland.

Participants - Patients aged 25 or more with a first ever diagnosis of an adverse upper gastrointestinal event (peptic ulcer or haematemesis) between 1 August 2000 and 31 July 2004 and up to 10 controls per case matched for age, sex, calendar time, and practice.

Main outcome measures - Unadjusted and adjusted odds ratios for adverse upper gastrointestinal events associated with celecoxib, rofecoxib, ibuprofen, diclofenac, naproxen, other selective and nonselective non-steroidal anti-inflammatory drugs, and aspirin.

Results - The incidence of adverse upper gastrointestinal events was 1.36 per 1000 person years (95% confidence interval 1.34 to 1.39). We identified 9407 incident cases and 88 867 matched controls. Increased risks of adverse gastrointestinal events were associated with current use of cyclo-oxygenase-2 inhibitors and with conventional non-steroidal anti-inflammatory drugs. Risks were reduced after adjustment for confounders but remained significantly increased for naproxen (adjusted odds ratio 2.12, 95% confidence interval 1.73 to 2.58), diclofenac (1.96, 1.78 to 2.15), and rofecoxib (1.56, 1.30 to 1.87) but not for current use of celecoxib (1.11, 0.87 to 1.41). We found clinically important interactions with current use of ulcer healing drugs that removed the increased risks for adverse gastrointestinal events for all groups of non-steroidal anti-inflammatory drugs except diclofenac, which still had an increased odds ratio (1.49, 1.26 to 1.76).

Conclusion - No consistent evidence was found of enhanced safety against gastrointestinal events with any of the new cyclo-oxygenase-2 inhibitors compared with non-selective non-steroidal anti-inflammatory drugs. The use of ulcer healing drugs reduced the increased risk of adverse gastrointestinal outcomes with all groups of non-steroidal anti-inflammatory drugs, but for diclofenac the increased risk remained significant.

Reference:

Hippisley-Cox J, et al. *Risk of adverse gastrointestinal outcomes in patients taking cyclo-oxygenase-2 inhibitors or conventional non-steroidal anti-inflammatory drugs: population based nested case-control analysis*. BMJ 2005; 331:1310-16.

INTEREXAMINER RELIABILITY OF MULTIDIMENSIONAL EXAMINATION REGIMENS USED FOR DETECTING SPINAL MANIPULABLE LESIONS: A SYSTEMATIC REVIEW¹

Objective - To determine the interexaminer reliability of multidimensional approaches to detection of the spinal manipulable lesion through a systematic review.

Literature search - MEDLINE and MANTIS were searched up until June 2004 using the following terms: reliability, interexaminer reliability, spine joint dysfunction, somatic dysfunction, chiropractic subluxation, manipulable lesion, chiropractic, manual medicine, osteopathy, motion palpation, spine palpation, and end play.

Study selection - Studies in English relating to interexaminer reliability of multi-dimensional approaches to detection of the spinal manipulable lesion. Six²⁻⁷ of 110 papers reviewed were included in the systematic review.

Quality evaluation - Two reviewers independently assessed papers based on a predetermined quality score. Three papers met minimal quality criteria.

Conclusion - This current review is the first systematic review of the reliability of multidimensional approaches and found that very little work of adequate quality has been done in this area with three of the six studies meeting minimal quality requirements. Further, only one (Keating et al .²) of the six studies showed any reliability approaching acceptable levels and that varied from marginal to good. Therefore, at this time, there is insufficient evidence to determine the level of interexaminer reliability of a multidimensional approach for detecting manipulable lesions. However, the use of multidimensional tests appears logical and sensible. Further, given the insufficient quality and quantity of the literature in this area, further research is warranted to better investigate a multidimensional approach.

References:

1. Gemmell H, Millar P. *Interexaminer reliability of multidimensional examination regimens used for detecting spinal manipulable lesions: A systematic review*. Clinical Chiropractic 2005;8:199-204.
2. Keating JC, Bergmann TF, Jacobs GE, Finer BA, Larson K. *Interexaminer reliability of eight evaluative dimensions of lumbar segmental abnormality*. J Manipulative Physiol Ther 1990;13:463–70.
3. French SD, Green S, Forbes A. *Reliability of chiropractic methods commonly used to detect manipulable lesions in patients with chronic low back pain*. J Manipulative Physiol Ther 2000;23:231–8.
4. Hawk C, Phongphua C, Bleecker J, Swank L, Lopez D, Rubley T. *Preliminary study of the reliability of assessment procedures for indications for chiropractic adjustments of the lumbar spine*. J Manipulative Physiol Ther 1999;22:382–9.
5. Boline PD, Haas M, Meyer JJ, Kassak K, Nelson C, Keating JC. *Interexaminer reliability of eight evaluative dimensions of lumbar segmental abnormality: Part II*. J Manipulative Physiol Ther 1993;16:363–74.
6. Kokmeyer DJ, van der Wurff P, Aufdemkampe G, Fickenscher TCM. *The reliability of multitest regimens with sacroiliac pain provocation tests*. J Manipulative Physiol Ther 2002;25:42–8.
7. Tuchin PJ, Hart CJ, Johnson C, Colman R, Gee A, Edwards I, et al. *Interexaminer reliability of chiropractic evaluation for cervical spine problems—a pilot study*. ACO 1996;5:23–9.

COMPLEMENTARY AND ALTERNATIVE MEDICINE IN PREGNANCY: A CROSS-SECTIONAL SURVEY

Background - Recently, the World Health Organization (WHO) defined CAM as “a broad set of health practices that are not part of a country’s own tradition, or not integrated into its dominant health care system.” Several large scale surveys indicate that more than one third of the United States population uses CAM therapies, the majority of them women. Other data indicate that 48% of all women of

childbearing age currently use at least one CAM therapy for health-related problems. Although it might be hypothesized that a significant number of pregnant women in the United States use CAM, the actual frequency and prevalence of overall CAM use by pregnant women is unknown, as is the frequency of CAM use for LBP during pregnancy.

Objective - To identify common treatments used for low-back pain (LBP) during pregnancy.

Design - A two-part

anonymous survey. **Setting/**

location - New Haven,

Connecticut.

Subjects - Pregnant women and providers of prenatal health care (nurse educators, nurse midwives, and obstetricians).

Results - We found that *the majority* of pregnant women who participated in our survey (61.7%) reported that they would accept complementary and alternative medicine (CAM) therapy as treatment for LBP during pregnancy. Similarly, *61% of providers of prenatal health care* in our sample reported that they would consider using CAM as treatment for LBP during pregnancy. Massage (61.4%), acupuncture (44.6%), relaxation (42.6%), yoga (40.6%), and **chiropractic (36.6%)** were the most common CAM therapies recommended for LBP in pregnancy by the providers of prenatal health care in our sample.

Conclusions - This two-part survey study found that both providers of prenatal health care and pregnant women in New Haven county are likely to use CAM treatments for pregnancy-induced LBP. Further investigation should focus on whether it is a nationwide phenomenon, as well as if various CAM therapies are an efficacious treatment for LBP during pregnancy.

Reference:

Wang SM, et al. *Complementary and Alternative Medicine for Low-Back Pain in Pregnancy: A Cross- Sectional Survey*. J Alt Complement Med 2005; 11:459-64.

CHIROPRACTIC FOR PATIENTS WITH STABLE ANGINA PECTORIS: A NONRANDOMIZED OPEN PROSPECTIVE TRIAL

Objectives - To examine if participants with chest pain originating from the spine would benefit from manual therapy.

Methods - A nonrandomized, open, prospective trial was performed at a tertiary hospital. Patients who were referred for coronary angiography because of known or suspected stable angina pectoris were invited to participate in this study. A total of 275 took part, 50 were diagnosed as cervicothoracic angina (CTA)- positive (chest pain from the cervicothoracic spine) and 225 as CTA-negative. The intervention performed was manual therapy according to chiropractic standards. Patient self reported questionnaires at baseline and 4-week follow-up, including pain measured with an 11-point box scale, Short Form 36 (quality of life), and perceived improvement.

Results - Approximately 75% of CTA-positive patients reported improvement of pain and of general health after treatment, compared with 22% to 25% of CTA-negative patients ($P < .0001$). Pain intensity decreased in both groups with consistently larger decreases for all measures of pain among CTA-positive patients. Short Form 36 scores increased in the CTA-positive group in 5 of 8 scales and remained unchanged in the CTA-negative group.

Conclusion - This study suggested that patients with known or suspected angina pectoris and a diagnosis of CTA may benefit from chiropractic manual therapy. Methodologically, sound randomized clinical trials are needed to corroborate our results.

Reference:

Christensen HW, Vach W, Gichangi A, et al. *Manual therapy for patients with stable angina pectoris: a nonrandomized open prospective trial.* J Manipulative Physiol Ther 2005;28:654-61.
