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Editorial Staff

The Nordic Back Pain Subpopulation Program: demographic and clinical predictors for outcome in patients receiving chiropractic treatment for persistent low back pain.

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Objective: To identify demographic and clinic-related predictors for successful outcome in patients with persistent low back pain receiving chiropractic treatment.

Design: Prospective uncontrolled multi-center study with internal control groups.

Subjects: Each of 115 Norwegian chiropractors, out of 205 invited, were asked to recruit 10 consecutive patients who had low back pain for at least 2 weeks at the time of consultation and a minimum of 30 days altogether within the preceding year. In all, 875 patients were included at baseline. The response rates at the fourth visit and at 3 and 12 months were 799, 598 and 512, respectively.

Methods: Baseline data were obtained through questionnaires administered to chiropractic patients and their treating chiropractors, and clinical information through questionnaires at the fourth visit from patients and chiropractors. Outcome was obtained from patients at the fourth visit. Mail surveys of patients were conducted after 3 and 12 months and additional information was obtained from chiropractors at 12 months in relation to treatment history.

Potential Predictors: Demography and information on past and present history, clinical findings, and prognosis.

Outcome Variable: Number of low back pain-free patients (defined as those with a maximum pain score of 1/10 and a maximum Oswestry score of 15/100).

Data Analysis: Positive predictive values and relative risks were calculated for each categorized predictor variable singly and in combination in relation to being low back pain-free at the 3 follow-up surveys.

Results: Treatment outcome at the fourth visit was best predicted by a model containing the following 5 variables: gender, social benefit, severity of pain, duration of continuous pain at 1st consultation, and additional neck pain (odds ratios between 2.2 and 4.3). A similar profile was found at 3 months, but 2 different variables (relating to disability) were the final variables in relation to the 12 months status. These final models were best at predicting absence of treatment success. Being low back pain-free at the fourth visit was a strong predictor for being low back pain-free both at 3 months and 12 months, with relative risks of 3.0 (2.2-4.8) and 3.1 (1.5-6.5), respectively.

Conclusion: In patients with persistent low back pain it is possible to exclude from treatment those who are unlikely to become low back pain-free after chiropractic care and to do this already before they have been examined clinically. Early recovery is a strong predictor for outcome up to 1 year later.

Key Indexing Terms: Low Back Pain; Chiropractic; Outcomes; Predictors; Prognosis.

Spinal manipulation, epidural injections and self-care for sciatica: a pilot study for a randomized clinical trial.

Gert Bronfort, DC, PhD; Roni L. Evans, DC; Michele Maiers, DC; Alfred V. Anderson, MD

Objective: To assess the feasibility of recruiting sciatica patients, and to evaluate their compliance in preparation for a full-scale randomized clinical trial. We also aimed to determine the responsiveness of key outcome measures.

Methods: Thirty-two subjects were randomly assigned to spinal manipulation (n=11), epidural steroid injections (n=11) or self-care education (n=10). No between-group comparisons were planned due to the small sample size.

Results: At week 12 (the end of the treatment phase), the outcome measures indicating the most improvement/change were the Oswestry disability score (mean=22.9, sd=19.9, effect size (ES)=1.8), leg pain severity (mean=2.9, sd=1.7, ES=1.7), and bothersomeness of symptoms (mean=25.2, sd=16.0, ES=1.6). Twenty-four patients were either "very satisfied" or "completely satisfied," and 22/32 patients reported 75% or 100% improvement. After 52 weeks, the outcome measure showing the most improvement/change was leg pain severity (mean=2.3, sd=2.6, ES=1.35), followed by the Oswestry disability score (mean=15.6, sd=20, ES=1.2), and bothersomeness of symptoms (mean=18.1, sd=22.6, ES=1.1). Eighteen patients were either "very satisfied" or "completely satisfied," and 15/32 patients reported 75% or 100% improvement.

Conclusions: The results of this pilot study suggest that it is feasible to recruit sub-acute and chronic sciatica patients and to obtain their compliance for a full-scale randomized clinical trial.

Key Indexing Terms: Chiropractic Manipulation; Drug Therapy; Spine; Sciatica.

Efficacy of preventive spinal manipulation for chronic low back pain and related disabilities: a preliminary study.

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Objective: To document the potential role of maintenance chiropractic spinal manipulation to reduce overall pain and disability levels associated with chronic low back conditions after an initial phase of intensive chiropractic treatments.

Methods: Thirty patients with chronic non-specific low back pain were separated into 2 groups. The first group received 12 treatments in an intensive 1-month period, but received no treatment in a subsequent 9-month period. For this group, a 4-week period preceding the initial phase of treatments was used as a control period to examine the sole effect of time on pain and disability levels. The second group received 12 treatments in an intensive 1-month period and also received maintenance spinal manipulation every 3 weeks for a 9-month follow-up period. Pain and disability

levels were evaluated with a visual analog scale and a modified Oswestry questionnaire, respectively.

Results: The 1-month control period did not modify the pain and disability levels. For both groups, the pain and disability levels decreased after the intensive phase of treatments. Both groups maintained their pain scores at levels similar to the post-intensive treatments throughout the follow-up period. For the disability scores, however, only the group that was given spinal manipulations during the follow-up period maintained their post-intensive treatments scores. The disability scores of the other group went back to their pre-treatment levels.

Conclusions: Intensive spinal manipulation is effective for the treatment of chronic low back pain. This experiment suggests that maintenance spinal manipulations following intensive manipulative care may be beneficial to patients in order to maintain subjective post-intensive treatments disability levels. Future studies, however, are needed to confirm the finding in a larger group of chronic low back patients.

Key Indexing Terms: Low Back Pain; Chiropractic Manipulation; Prevention.

A brief history of the AP open-mouth radiograph.

John Hart, DC

Objective: To describe the origins of the anteroposterior (AP) open-mouth radiograph.

Methods: Searches in PubMed, standard X-ray texts, and telephone interviews.

Results: The AP open-mouth radiograph has a long history of use in the chiropractic and medical professions. The view is taken to assess the upper cervical vertebrae (C1 and C2) and some chiropractors include assessments of the atlanto-occipital articulations using the AP open-mouth X-ray procedure. One text cites a 1910 background reference for this view, but further investigation revealed an earlier edition of the 1910 publication, which gave a description of how to take an AP open-mouth radiograph. The first documentation that this view had been taken was found in a 1919 chiropractic text. Chiropractors appear to have been the first to include an atlanto-occipital biomechanical analysis within the AP open-mouth radiograph.

Conclusion: The origins of the AP open-mouth radiograph date back to the early 1900s. A medical doctor in Germany appears to have been the first to describe the procedure for this X-ray view. By the 1930s, chiropractors were including the occiput into the view's analysis, along with the traditional application of C1 and C2 assessment.

Key Indexing Terms: Chiropractic; History; Radiology.

Hamate hook fracture in a 17-year-old golfer: importance of matching symptoms to clinical evidence.

Marion Willard Evans, Jr., DC

Objective: To describe the importance of correlating symptoms with objective clinical findings and appropriate diagnostic imaging in a patient with traumatic wrist pain.

Clinical Features: A 17-year-old golfer had persistent left wrist pain of 4 months duration that came

on while playing golf. Approximately 1 week after injury, he was diagnosed with a scaphoid fracture and was splinted. He reported that his pain did not decrease with splinting or subsequent physical therapy, and that upon dismissal from orthopedic care, he could not use the wrist well enough to return to golf.

Intervention and Outcome: The patient was found to have marked point tenderness at the hamate. Although plain film radiography was negative, secondary computed tomography of the wrist revealed a fracture to the hook of the hamate. A referral was made to an orthopedic surgeon and surgical excision of the hook of the hamate was recommended due to the failure of union at the fracture site.

Conclusion: This case demonstrates the significance of follow-up diagnostic imaging in a patient who does not respond as expected. In addition, it stresses the importance of the doctor of chiropractic in the diagnostic process, even though the patient may have been treated and released by another physician.

Key Indexing Terms: Fractures; Wrist; Sports Injuries; Chiropractic.

Post-surgical rehabilitative management of avascular necrosis in the capitate.

David P. DeSantis, DC

Objective: To discuss a case of avascular necrosis of the capitate and the follow-up post-surgical rehabilitation.

Clinical Features: A 41-year-old female had severe left wrist pain. A short course of passive therapy was administered with no significant change. She was referred for additional diagnostic testing, including MRI. This assisted in diagnosing the patient with avascular necrosis of the capitate. After undergoing surgical intervention, she was cleared to start an active rehabilitation program. She had significant loss of muscle strength and muscle atrophy, and diminished active range of motion in the wrist and forearm.

Interaction and Outcome: The patient underwent surgical intervention consisting of an arthroplasty to the capitate. The follow-up rehabilitation techniques included the use of active and passive stretching, therapeutic putty and light dumbbells. The patient was seen a total of 21 times over a 9-week time period. Outcome assessments were given intermittently during care to monitor progress. At the end of the program, she reported full function of the wrist with minimal to no pain. A 6-month follow up revealed improvements that were maintained with little pain.

Conclusion: Avascular necrosis of the capitate is relatively rare. The use of advanced imaging should be used for diagnostic purposes. Surgical intervention may be warranted; however, it is recommended a post-surgical rehabilitative procedure be implemented.

Key Indexing Terms: Rehabilitation; Avascular Necrosis; Capitate.

Cervical kyphosis is a possible link to ADHD.

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Objective: To discuss the case of a patient diagnosed with ADHD by a general practitioner and then

treated with chiropractic care.

Clinical Features: A 5-year-old patient was diagnosed with ADHD and treated by a pediatrician unsuccessfully with Methylphenidate (Ritalin), Adderol, and Haldol for 3 years. The patient received 35 treatments over the course of 8 weeks. A change from a 12-degree C2-C7 kyphosis to a 32-degree C2-C7 lordosis was observed at post-treatment. During chiropractic care, the child's facial tics resolved and his behavior vastly improved. After 27 chiropractic visits, the child's pediatrician stated that the child no longer exhibited symptoms of ADHD. The changes in structure and function may be related to the correction of cervical kyphosis.

Conclusion: The patient experienced significant reduction in symptoms. Additionally, the medical doctor concluded that the reduction in symptoms was significant enough to discontinue the medication. There may be a possible connection such that correction of cervical kyphosis in patients with ADHD may produce a desirable clinical outcome.

Key Indexing Terms: Attention Deficit Hyperactivity Disorder; Cervical Traction; Chiropractic Manipulation.

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