Adding Chiropractic Manipulative Therapy to Standard Medical Care for Patients With Acute Low Back Pain: Results of a Pragmatic Randomized Comparative Effectiveness Study

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CMT chiropractic manipulative therapy
NRS numerical pain rating scale
RMQ Roland-Morris Disability Questionnaire
BPFS back pain functional scale
NSAID nonsteroidal anti-inflammatory drug

The object of this study was to assess changes in pain levels and physical functioning in response to standard medical care (SMC) versus SMC plus chiropractic manipulative therapy (CMT) for the treatment of low back pain (LBP) among 18 to 35-year-old active-duty military personnel.

46 soldiers (from Fort Bliss) with acute LBP were randomized to the SMC group. 45 were randomized to the SMC plus CMT group.

The primary outcome measures were changes in back-related pain on the numerical rating scale and physical functioning at 4 weeks on the Roland-Morris Disability Questionnaire and back pain functional scale (BPFS).

KEY POINTS FROM THIS STUDY:

1) The lifetime prevalence of LBP has been estimated to be as high as 84%.

2) “Manipulative therapy delivered by doctors of chiropractic is commonly used to treat patients with LBP. At least 7.5% of US adults seek care from chiropractors annually, representing approximately 190 million patient visits.”

3) Standard Medical Care (SMC) included any or all of the following:
   • Education about self-management including maintaining activity levels as tolerated.
   • Drug management with the use of analgesics and anti-inflammatory agents.
   • Physical therapy and modalities such as heat/ice.
   • Referral to a pain clinic.

4) The number of visits in the SMC group was in the range of 0 to 8, with a mean of 1.4 visits.
• 37% were prescribed drugs, including nonsteroidal anti-inflammatory drugs, muscle relaxants, benzodiazepines, analgesic creams, and narcotics.
• 33% were placed on a treatment plan (exercise program, range of motion, stretching and modalities including heat and electrical stimulation) delivered primarily by a physical therapist.

5) Chiropractic Manipulative Therapy (CMT) included:
• Up to 2 visits weekly with a doctor of chiropractic (DC) for 4 weeks.
• Side posture HVLA manipulation as the primary approach in all cases.
• Ancillary treatments at the doctor’s discretion, including brief massage, the use of ice or heat in the lumbar area, stretching exercises, McKenzie exercises, advice on activities of daily living, postural/ergonomic advice; and mobilization.

6) Those assigned to SMC plus CMT had a mean of 1 visit for SMC (range, 0–4) and a median of 7 visits for CMT (range, 2–8). All patients received HVLA. In addition, patients may have received 1 or more of the following services provided by the DC: mobilization, brief massage, use of ice in the lumbar area, stretching exercises, McKenzie exercises, advice for activities of daily living, postural/ergonomic advice.

7) Mean Roland-Morris Disability Questionnaire scores were significantly better in the SMC plus CMT group compared to the SMC group at both week 2 and week 4.

8) Mean numerical rating scale pain scores were significantly better in the group that received CMT.

9) Adjusted mean back pain functional scale scores were significantly improved in the SMC plus CMT group compared to the SMC group at both week 2 and week 4.

10) “73% of participants in the SMC plus CMT group rated their global improvement as pain completely gone, much better, or moderately better, compared with 17% in the SMC group.”

11) “The mean satisfaction with care score on a 0 to 10 scale for the SMC plus CMT group was 8.9 at both weeks 2 and 4; the mean for the SMC group was 4.5 at week 2 and 5.4 at week 4.”

12) “The results of this trial suggest that CMT, in conjunction with SMC, offers a significant advantage for decreasing pain and improving physical functioning compared with only SMC.”

13) The results of this study “indicate a statistically and clinically significant benefit to those receiving CMT in addition to SMC.”