Chiropractic Spinal Manipulative Therapy:
International Guidelines Reviewed

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Acute lower back pain is a frequent complaint of patients in a medical practice. Chiropractic spinal manipulative therapy (CSMT) is a commonly utilized treatment modality for patients with acute lower back pain, with over 5.4 million patients consulting a chiropractor in Canada on an annual basis.[1] Recent studies have demonstrated that Canadian family physicians may be unclear on the indications for referring a patient with acute lower back pain for CSMT.[2-3]

In the last decade, 12 countries have independently convened multidisciplinary expert panels to critically review the scientific literature on acute lower back pain. The result has been a remarkably consistent set of clinical practice guidelines, based on sound scientific evidence, rather than on consensus, that are designed to assist family physicians in the management of these patients.[4-5] Family physicians have been reluctant to adopt these guidelines and it has been demonstrated that there is a poor association between what family physicians believe to be effective for treating patients with acute lower back pain and what has actually been found to be effective.[6-7] Large scale clinical trials in Canada and Spain have shown that family physician treatment recommendations are highly guideline-discordant.[8-9] This paper will review these clinical practice guideline recommendations and in particular, will summarize the guideline recommendations for the use of CSMT in the treatment of acute lower back pain.

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Table 1

Clinical practice guidelines for the treatment of acute lower back pain

- Reassurance of the favourable natural history
- Advice to stay active
- Discourage bed rest
- Acetaminophen, p.r.n.
- Chiropractic spinal manipulative therapy (CSMT)
- Advice against passive physiotherapy modalities, prolonged bed rest or specific back exercises

The common elements of the clinical practice guidelines recommended treatments for patients with acute mechanical lower back pain, stress the importance of:

- providing reassurance of the favourable natural history,
- remaining active and
- returning to normal activities in some capacity, as soon as possible.

The majority of the clinical practice guidelines recommend the use of acetaminophen, rather than non-steroidal anti-inflammatory drugs due to the more favorable gastrointestinal side-effect profile and recommend against the use of muscle relaxant and opioid-class medications. The guidelines also recommend against the use of passive physiotherapy modalities, bed rest and special back exercise programs. The majority of the guidelines recommend in favor of the use of a short course of spinal manipulative therapy in the first four weeks to six weeks after the onset of symptoms (Table 1).

Prior to the referral of a patient for CSMT, certain red flag conditions should be ruled out as they represent an absolute contraindication to lumbar spinal manipulative therapy (Table 2). These include:

- clinical signs of cauda equina syndrome,
- progressive neurological deficit,
- unexplained weight loss or
- signs of systemic infection.

In addition, the following represent relative contraindications to CSMT and require further diagnostic investigation to rule out underlying bone pathology prior to commencing CSMT (Table 2):

- clinical findings of severe lower back pain in a patient < 20-years-old or > 55-years-old,
- a history of severe trauma in association with the onset of the pain,
- prior history of cancer,
- use of oral steroids,
- intravenous drug abuse,
- osteoporosis or
- a significant scoliosis.

Table 2

CSMT contraindications

Absolute:

- Cauda equina syndrome
- Progressive neurological deficit
- Unexplained weight loss
- Signs of systemic infection

Relative:

- Severe lower back pain in patients under the age of 20 years or older than 55 years
- Violent trauma, such as a fall from a height or a motor vehicle accident
- Previous history of carcinoma
- Use of oral steroids
- Intravenous drug abuse
- HIV infection
- Significant structural deformity
- Constant, progressive, non-mechanical pain
- Night pain not relieved in the supine position
- Thoracic or abdominal pain
- Persistent, severe restriction of lumbar flexion
- Osteoporosis

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Guideline-concurrent CSMT differs from other forms of chiropractic treatment in some important aspects (Table 3). Specifically, the guidelines recommend:

- the use of spinal manipulation administered exclusively by hand (and not through the use of a mechanical device, or light touch applied to the upper cervical spine),
- manipulation administered solely to the lumbosacral spine and not to the cervical spine (in a patient with acute lower back pain) and
- refraining from the use of full spine X-rays.

Table 3

Guideline concordant components of CSMT

- Spinal manipulation administered exclusively by hand
- Manipulation administered solely to the lumbosacral spine
- Refraining from the use of full-spine X-rays
- Maximum six to eight CSMT treatments in the first four weeks to six weeks

Chiropractic Referral Memo

Dr._____, Chiropractor Date: _____

Phone:_____ Fax: _____

Patient's Name:_____
Address:_____
_____

Birthdate:_____ Phone#:_____

I am referring my patient who has had acute lower back pain for _____ weeks

I would like my patient to receive:

- ☐ **Spinal manipulation administered exclusively by hand**
- ☐ **Treatment to the lumbosacral spine only**
- ☐ **A maximum of 6 to 8 treatment sessions**
- ☐ **Other / Comments:_____**

_____

_____

Referring physician:_____
Address:_____
Phone:_____
Fax: _____

The clinical practice guidelines recommend a maximum of three weeks to four weeks of CSMT, administered within the first four weeks to six weeks of the patient's clinical course. So-called maintenance CSMT is not guideline concurrent. Given the diversity of patterns of Canadian chiropractic clinical practice, it is highly recommended that family physicians choosing to refer a patient for CSMT should specify the exact parameters of the treatment that they want their patient to receive. A sample Chiropractor Referral Memo form has been provided.

Finally, the use of CSMT in the treatment of patients with acute lower back pain should not be viewed as a "stand alone" therapy (*i.e.,* "let's try a chiropractor"). On the contrary, the guidelines recommend CSMT as a component of care to be used in combination with the other guideline concordant treatments.

In summary, evidence-based clinical practice guidelines, for the management of patients with acute lower back pain have been developed and published on an international scale. CSMT is a recommended component of these guidelines. Preliminary studies where components of the guidelines have been implemented have shown greatly improved patient outcomes when compared with guideline discordant treatments.[10] A large-scale, randomized control trial, involving all of the guideline-recommended treatments, including guideline-concordant lumbar spinal manipulative therapy provided by experienced chiropractors, is currently underway in our centre.

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References
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