New findings for the treatment of chronic, nonspecific low back pain

Two forms of nonspecific low back pain are seen as major public health problems worldwide. These two conditions are low back pain (LBP), not attributable to a recognizable, specific pathology, and chronic LBP (C-LBP), indicating the presence of LBP for more than 3 months. Close to 12% of the population is disabled by LBP[1,2] and its lifetime prevalence is as high as 84%, whereas the lifetime prevalence of C-LBP is about 23%.

The recent findings on these two conditions, based on high-quality,[3] systematic reviews, are as follows:

The many classification systems of LBP can be divided into three categories: diagnostic, prognostic, and directing treatment.[4] At present, none of the classification systems can be adopted for all purposes.[4] Some classifications, such as the Quebec Task Force, National Institute for Occupational Safety and Health, and McKenzie, have been validated and showed some degree of reliability. But each of these classification systems remains at the hypothesis-generating stage, which means they still need to be tested and replicated by future studies to determine their applicability.[5-7]

Outcome measures should be routinely assessed in C-LBP patients,[8] and should be chosen based on the patient's most important domains, such as pain, function, and quality of life. Based on the ease of administration and the patient's responsiveness, the Visual Analog Scale or the Numeric Rating Pain Scale is recommended for measuring pain, the Oswestry Disability Index or the Roland Morris Disability Questionnaire for measuring function, and the SF-36 or SF-12 for measuring quality of life. Furthermore, the Fear Avoidance Belief Questionnaire, Tampa Scale for Kinesiophobia, or Beck Depression Inventory is most useful for measuring psychosocial domains. Objective outcomes can be measured based on the patient's return to work, complications, or response to medication.

Surgery for C-LBP provides the most responsive pain (Visual Analog Scale) and functional outcome (Oswestry Disability Index) measures; these are the only outcome measurement tools that demonstrate large effect size.[9] However, following spinal surgery for C-LBP, changes in pain have little correlation with changes in health-related, quality-of-life outcomes.

MRI findings and C-LBP show a weak association. However, the link between degenerative MRI findings and C-LBP cannot be established, owing to the quality, cross-sectional nature, and heterogeneity of the underlying population in the primary studies.[10] Furthermore, there is no evidence to suggest a greater benefit from the use of surgical treatment over nonsurgical treatment to address degenerative MRI changes. Therefore, the use of MRI for the work-up of C-LBP and the surgical treatment of C-LBP are not recommended, should they be based solely on degenerative MRI changes.

Opioids and NSAIDs are said to be effective in treating C-LBP, but antidepressants have no meaningful clinical benefits. Furthermore, opioids are not recommended for treating C-LBP, because they are associated with significant side effects and demonstrate no greater effectiveness than NSAIDs.[11]

Structured exercise and spinal manipulative therapy appear to offer equal benefit in the management of pain and function in C-LBP.[12] If no clinical benefit is observed following 8 weeks of structured exercise or spinal manipulative therapy, the treatment plan should be re-evaluated, and perhaps, modified. At present, insufficient evidence exists to assess the relative benefit of acupuncture against structured exercise or spinal manipulative therapy.

Spinal fusion surgery can be considered for patients with isthmic spondylolisthesis, and following failed nonsurgical treatment.[13] At 2 years, the standardized mean difference for pain and function in favor of fusion was modest among those without isthmic spondylolisthesis. However, for isthmic spondylolisthesis patients facing a lengthy rehabilitation, the results significantly favored fusion.

Fusion surgery demonstrates greater benefits than conservative treatments among C-LBP patients who are nonsmokers or have no additional comorbidities.[14]

C-LBP patients with personality disorders may respond better to conservative treatments, while those without a personality disorder may respond more favorably to fusion. Patients with higher depression and neuroticism scores may also respond better to conservative management.[15]

Contrary to some beliefs, C-LBP patients with pending litigation, on sick leave, with lighter jobs, or those who are unmarried, may respond better to fusion than to nonoperative care.[16] However, these findings need to be replicated further by other studies.

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This article is the opinion of WorkSafeBC and has not been peer reviewed by the BCMJ *Editorial Board.*

References

All references indicated above are available online at bcmj.org.