Improved evidence-based management of acute musculoskeletal pain

Guidelines from the National Health and Medical Research Council are now available

A recent World Health Organization report on the burden of musculoskeletal conditions in 2002 noted that these were a major cause of morbidity throughout the world. While much of this burden of disease is due to chronic arthropathies such as rheumatoid arthritis and osteoarthritis, the commonest problems by far involve acute musculoskeletal pain in the back, neck and large joints. "Acute" is defined as duration of symptoms not exceeding 3 months.

There is a perception that the management of acute musculoskeletal pain is poor, and mainly driven by individual experience, clinical consensus, and descriptive studies. The absence of an accessible and rigorous evidence base has led to variations in practice, unnecessary investigations and imaging, and inappropriate and ineffective treatments with their potential for increasing morbidity, and unnecessary costs.

Choosing best clinical practice in the care of acute musculoskeletal pain has been made easier with the recent release of guidelines for managing acute musculoskeletal pain by the National Health and Medical Research Council (NHMRC).[1] Five multidisciplinary review groups were formed to address draft guidelines developed by the Australian Faculty of Musculoskeletal Medicine. The groups involved representatives from such diverse disciplines as general practice, rheumatology, orthopaedics, chiropractic, physiotherapy, pain medicine, rehabilitation, sports medicine and consumer groups. This wide representation was deliberate and aimed to minimise possible bias of different craft groups. The brief for each group was to formulate guidelines based on the best available evidence for management of acute musculoskeletal pain in the lower back, thoracic spine, the neck, shoulder or anterior aspect of the knee. The methods of the evidence review were based on NHMRC standards,[2] and the Cochrane proposal of rationalisation of diagnostic and therapeutic intervention.[3] Where no good evidence existed, consensus statements were made by a steering committee, or no recommendation was made, except to signal the need for research to gain appropriate data.

For each site of pain, the guidelines provide information on diagnosis, prognosis and interventions. Three pertinent questions which arise from all the guidelines are discussed below.

How can we use the guidelines? Management of patients with acute musculoskeletal pain has to be individualised, and tailored to patients' response and compliance. This will obviously vary between patients and locations depending on resources and availability of services. However, the delineation of the treatment options in the NHMRC guidelines will improve knowledge and, it is to be hoped, enhance standards of care. As patients seeking help may find their condition altered by the diagnostic and therapeutic approach, and

Key messages of the guidelines

1. Most acute musculoskeletal pain is non-specific, and serious causes are rare.
2. Patient history enables screening for features of serious conditions, but reliability and validity of individual features have low diagnostic significance.
3. Clinicians need to be alert for the development of fragility fractures in those aged over 60 presenting with thoracic pain.
4. Clinical signs detected during physical assessment need to be interpreted cautiously, as many tests lack reliability and validity. This is true in most of the acute conditions, including those of the shoulder, where many eponymous tests are performed to try to reach an accurate diagnosis. This is not necessary for effective management of most pain, but is important in identifying disorders likely to become chronic or to have a serious underlying cause.
5. Plain x-rays are not routinely recommended in acute conditions, as they are of limited diagnostic value. The exceptions are the "red flag" features (infection, fracture, tumour, aneurysm) signifying possible serious underlying abnormality.
6. Common findings (eg, osteoarthritic changes) occur in both symptomatic and asymptomatic patients and might not be the cause of pain.
7. Education about the limitations of x-rays and their risk is recommended.
8. Most acute conditions settle within 3 months, although a few persist with some disability and recurrence is not uncommon. In the case of shoulder pain, the 12-month recovery rate is only 60%.
9. Psychosocial and occupational factors appear to be associated with progression from acute to chronic pain and should be addressed early.
10. Although published data are limited, advice to remain active, providing an educational booklet and community-based exercise appear to be cost-effective first-line interventions for acute low back pain.
11. In acute neck pain, an exercise program at home appears as effective at 2 months and more effective at 2 years than institutional-based therapy.
12. There are no randomised controlled trials of manipulation therapy for acute neck pain. Adverse effects of manipulation are rare but potentially serious. Non-steroidal anti-inflammatory drugs (NSAIDs), transcutaneous electrical nerve stimulation, soft collars and similar treatments all lack Level I or II evidence for benefit. There is evidence of a moderate benefit of NSAIDs in acute shoulder pain over 4 weeks compared with placebo.
13. It is preferable to use terms such as "anterior knee pain" than attempting to be more specific in acute knee pain. Although lacking specificity, examination is important to exclude serious disorders.
14. Specific eccentric quadriceps strengthening exercises produce better outcomes in anterior and non-specific knee pain than standard exercises.

usually not for the better in a self-limiting, acute condition,[4] the guidelines may also allow patients to rely on their own resources to cope with a disorder that is acute, but of short duration.

Are the guidelines unique? Several evidence-based guidelines for the management of acute low back pain exist.[5] However, the NHMRC acute musculoskeletal pain guidelines are the most extensive that are currently available for the problems they cover. In addition, the guidelines for acute low back pain have been assessed for safety, efficacy and cost effectiveness in a primary care setting.[5] Compliance with the guidelines achieved marginally better symptomatic relief, resulting in less need for continuing care, achieved greater rates of full recovery, was less expensive, and attracted higher consumer satisfaction.[5]

How good is the evidence? This varies within each condition. Acute low back pain only has consensus statements (as opposed to any level of evidence) about effective communication. In the diagnosis, prognosis and intervention sections, the level of evidence ranges from Level I to Level IV. There is Level I and II evidence that oral and injectable non-steroidal anti-inflammatory drugs (NSAIDs) are no more effective than placebo or no treatment for acute low back pain. Heat-wrap therapy was more effective than NSAIDs, paracetamol or placebo in reducing pain in the first 3–4 days. This information alone could save the community considerable expense and morbidity.

The main purpose of guidelines is to improve the quality of care for patients, but their existence does not guarantee their use in practice.[6,7] Propagation of guidelines by publication or through special societies is a start, but more active strategies are needed to maximise the likelihood of the clinical guidelines becoming effective.[8] Computer software would be most helpful for doctors in incorporating the NHMRC acute musculoskeletal pain guidelines into practice. As with all guidelines, the evidence base is unstable and will need to be regularly updated to remain useful. The remedy proposed by the Committee was that funding should be made available for an annual survey of the members of the steering and review committees to update the information, and for searches of the literature and electronic databases to determine the need for revision. Whether this will happen is not clear.

We believe these guidelines are unique in their comprehensiveness, the rigour of evaluation of the evidence and the usefulness to the community as a whole. They also contain information sheets produced specifically for the public which are free of jargon and have simple explanations. The sheets summarise the benefits and minimise the harm of available options and should empower patients to make more informed choices and to consider their needs and priorities in selecting the best option.

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