ICSI Releases Guideline on Chronic Pain Assessment and Management

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Guideline source: Institute for Clinical Systems Improvement

Literature search described? Yes

Evidence rating system used? Yes

Available at: http://www.icsi.org/pain__chronic__assessment_and_management_of_14399/pain__chronic__assessment_and_management_of__guideline_.html

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In November 2009, the Institute for Clinical Systems Improvement (ICSI) released a guideline on the assessment and management of chronic pain in adults and physiologically mature adolescents 16 to 18 years of age. The guideline was developed by a multidisciplinary work group and included a literature search and review of evidence. *Table 1* summarizes the evidence for level I and II treatments for chronic pain.

Assessment of Chronic Pain

Chronic pain is defined as persistent pain, either continuous or recurrent, that affects patients' well-being, level of function, and quality of life. A general history and physical examination are necessary in patients presenting with chronic pain. Pain lasting six weeks or more requires a thorough evaluation. In assessing chronic pain, physicians should document the following: pain location, intensity, quality, and duration; functional ability and goals; and psychological or social factors, such as depression or substance abuse. Obtaining a baseline functional ability assessment can provide objectively verifiable information about patients' quality of life and ability to participate in normal activities.

Physicians should create a comprehensive care plan for each patient that addresses biopsychosocial factors in addition to spiritual and cultural issues. Care plans should include pain assessment tools for patients to self-report their progress, as well as instructions for regular reassessment and follow-up.

Although there is no diagnostic test for chronic pain, testing may be useful to direct treatment and, if necessary, referral. Radiography may help rule out pathology that requires immediate attention in patients with musculoskeletal pain. Magnetic resonance imaging (MRI) and computed tomography (CT) may be used in patients with spine-related pain. MRI is generally preferred for evaluating disk pathology; CT may be useful in patients who cannot undergo MRI or who are being considered for surgery.

Types of Chronic Pain

The ICSI work group identified four types of pain: neuropathic, muscle, inflammatory, and mechanical/compressive pain. Treatment depends on the type of pain. Because patients' pain may have more than one mechanism, physicians should determine the relative contribution of each mechanism to the total pain and treat accordingly. If the diagnosis is uncertain, referral to a pain subspecialist may be warranted.

NEUROPATHIC PAIN

Neuropathic pain, which is usually described as a burning or shooting/stabbing pain, is caused by damage to or dysfunction of the nervous system. Examples include sciatica, diabetic peripheral neuropathy, trigeminal neuralgia, and postherpetic neuralgia. Patients with diabetes and persistent pain are likely to have neuropathic pain, as are patients who develop pain after a stroke. Physical findings that point to neuropathic pain are numbness in the pain territory, sensitivity to a non-noxious stimulus (e.g., light touching, rubbing), or coolness of the skin in pain territory. Research suggests that fibromyalgia is a centrally mediated neuropathic pain syndrome and may be considered a type of neuropathic pain.

MUSCLE PAIN

Chronic muscle pain is common, and generally does not prevent patients from performing daily activities. Skeletal muscle pain is one common cause of chronic pain. Myofascial pain, which is common in patients seen in pain clinics, is regional muscle soft tissue pain usually involving the neck, shoulders, arms, low back, hips, and lower extremities. If muscle pain is not properly ▶

diagnosed, it can lead to poor treatment outcome, delayed recovery, or ineffective and unnecessary surgery.

INFLAMMATORY PAIN

Examples of inflammatory pain include arthritis, infection, tissue injury, and postoperative pain. Clinical features may include heat, redness, swelling at the site of pain, and a history of injury or inflammation.

MECHANICAL/COMPRESSIVE PAIN

Patients with mechanical/compressive pain typically experience aggravated pain during activity and temporary relief during rest. Neck and back pain are often related to muscle or ligament strain or sprain, degeneration of disks or facets, or osteoporosis with compression fractures. Mechanical/compressive pain may be identified by history and radiologic findings, such as fractures, obstructions, dislocations, or compression of tissue by tumor, cysts, or bony structure.

Level I and II Treatment

The goals of chronic pain treatment should include improving function and developing self-management skills that focus on fitness and a healthy lifestyle. Level I treatment involves standard approaches to chronic pain management, including pharmacologic, nonpharmacologic, intervention, and complementary and alternative medicine (e.g., acupuncture, herbal products). These approaches should be implemented before level II approaches are considered.

Level I management begins with a written plan of care using the biopsychosocial model. This plan should address the whole person, including physical and biologic factors; psychological state and beliefs; and family, social, and work environments. Care plans should set personal goals, improve sleep, increase physical activity, manage stress, and decrease pain. Level I management also involves participation in an exercise program to improve function and fitness, as well as cognitive behavior strategies to help reduce pain and improve function.

Physicians should be aware that patients' psychological difficulties do not invalidate reports of pain or eliminate the possibility that a general medical condition is

Table 1. Management of Chronic Pain: Evidence Grid

Level I treatment	*A*	*B*	*C*	*D*	*M*	*R*	*X*
Plan of care using biopsychosocial model	x			x			
Physical rehabilitation							
Fitness/exercise program	x				x	x	
Massage	x						
Other passive modalities						x	
Psychosocial management							
Cognitive behavior therapy	x			x	x	x	
Mindfulness-based stress reduction				x			
Hypnosis					x	x	
Biofeedback					x	x	
Pharmacologic management							
NSAIDs	x						
Opioids	x		x	x	x	x	
Other antidepressants (SSRIs and SNRIs)	x						
Anticonvulsants	x				x		
Topical agents	x			x	x		
Muscle relaxants					x	x	
Anxiolytics				x			
Drugs for insomnia					x		
Intervention management							
Diagnostic procedures			x			x	
Therapeutic procedures	x				x	x	
Complementary management							
Acupuncture	x		x		x	x	
Herbal products	x			x	x	x	
Level II treatment	*A*	*B*	*C*	*D*	*M*	*R*	*X*
Surgical management			x		x	x	
Palliative interventions				x	x	x	
Nucleoplasty				x			
Spinal cord stimulation					x		
Intrathecal medication delivery		x					
Multidisciplinary pain rehabilitation				x	x	x	
Management for specific types of pain	*A*	*B*	*C*	*D*	*M*	*R*	*X*
Neuropathic pain	x			x	x	x	
Muscle pain			x			x	
Inflammatory pain			x			x	
Mechanical/compressive pain			x			x	
Manipulative therapy	x		x			x	

continued

Table 1. Management of Chronic Pain: Evidence Grid
(continued)

Institute for Clinical Systems Improvement Evidence Grading System	
Class A	Randomized controlled trial
Class B	Cohort study
Class C	Nonrandomized trial with concurrent or historical controls
	Case-control study
	Study of sensitivity and specificity of a diagnostic test
	Population-based descriptive study
Class D	Cross-sectional study
	Case series
	Case report
Class M	Meta-analysis
	Systematic review
	Decision analysis
	Cost-effective analysis
Class R	Consensus statement
	Consensus report
	Narrative review
Class X	Medical opinion

NSAID = nonsteroidal anti-inflammatory drug; SNRI = serotonin-norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor.

causing the pain. An understanding of patients' ethnic and cultural background, age, sex, and spirituality may help physicians choose appropriate treatment for chronic pain. Physicians should also encourage patients to actively participate in the care plan through self-management.

Level II treatment options include referral for multidisciplinary pain rehabilitation or surgery for placement of a spinal cord stimulator or intrathecal pump. These options should be considered only if conservative treatment options are unsuccessful. Level II treatments are designed for patients with complex and challenging chronic pain. These options are typically more expensive and require a considerable investment from patients to be effective.

Management of Chronic Pain

NEUROPATHIC PAIN

Local or regional therapies can reduce neuropathic pain without systemic adverse effects. These include topical capsaicin and topical lidocaine in the form of a cream (LMX 4) or patch (Lidoderm). Stimulation-based therapies, such as transcutaneous electrical nerve stimulation, may provide temporary relief in patients experiencing neuropathic pain caused by nerve root or plexus lesions. However, these therapies may also cause irritation, especially if allodynia is present. To prevent irritation, the stimulating electrode should be applied to adjacent, uninvolved dermatomes.

First-line pharmacologic treatments for neuropathic pain include gabapentin (Neurontin) and pregabalin (Lyrica). These drugs have a favorable adverse effect profile and rarely interact with other drugs. Both are indicated for diabetic neuropathy, postherpetic neuralgia, fibromyalgia, and partial onset seizure. Other drugs that may be considered for neuropathic pain include anticonvulsants (e.g., carbamazepine [Tegretol], topiramate [Topamax], lamotrigine [Lamictal], oxcarbazepine [Trileptal], tiagabine [Gabitril]) and tricyclic antidepressants (e.g., amitriptyline, nortriptyline [Pamelor], desipramine [Norpramin], imipramine [Tofranil]). Duloxetine (Cymbalta) and venlafaxine (Effexor) have also been shown to be effective in patients with diabetic neuropathic pain and fibromyalgia. Additionally, corticosteroids may be used for short-term control of neuropathic radicular pain caused by tumor edema, tumor invading bone, and acute or subacute disk herniation.

Because of their role as potent analgesics, opioids may be considered for treating neuropathic pain in carefully selected patients. Methadone and tramadol (Ultram) may be more effective than other opioids for treating neuropathic pain.

MUSCLE, INFLAMMATORY, AND MECHANICAL/COMPRESSIVE PAIN

Patients with muscle, inflammatory, or mechanical/compressive pain should first be screened for psychological and social factors that may delay their recovery. Physicians should use a numeric pain rating and functional scale to determine the severity of pain-related disability. Pain may be treated with physical rehabilitation, behavior management, or pharmacotherapy. Before initiating physical rehabilitation, physicians should determine patients' baseline fitness level. Physical rehabilitation may consist of a fitness program that incorporates gentle graded strength training, cardiovascular exercise, flexibility, and balance. Body mechanics, aquatic therapy, and modalities such as ice, heat, and massage may also be used. Behavior management strategies may involve reducing depression or stress, learning relaxation techniques, initiating cognitive behavior therapy, treating chemical dependency, learning anger management

strategies, and incorporating biofeedback training. A biopsychosocial interdisciplinary team approach is most effective for psychosocial rehabilitation strategies, such as cognitive behavior therapy.

Pharmacotherapy with tricyclic antidepressants, such as a low dose of nortriptyline, may help with chronic pain. Opioids are rarely needed. Nonsteroidal anti-inflammatory drugs may be considered in patients with inflammatory or mechanical/compressive pain. Immunologic drugs and other antidepressants may be considered in patients with inflammatory pain.

In patients with mechanical/compressive pain, noradrenergic or noradrenergic-serotonergic antidepressants may provide pain relief. There is limited evidence for the effectiveness of muscle relaxants. Opioids should be considered only in patients who do not respond to conservative treatment. Many invasive treatment options lack scientific evidence for use in patients with mechanical/compressive pain, as does surgery for nonspecific chronic spinal pain. Surgery for cervical or lumbar radicular pain lacks scientific evidence and should be considered only in carefully selected patients. Manipulative therapy, within the context of interdisciplinary treatment, has been shown to be an efficient and effective treatment to improve pain and function in patients with mechanical/compressive pain. Osteopathic assessment and treatment may be considered in certain patients.

Pharmacologic Management

Pharmacologic management should not be the only focus of treatment in patients with chronic pain but should be combined with other modalities to meet treatment goals. Before medication is prescribed, physicians and patients must define the goals of therapy. Medications should be directed not only toward pain relief, but also toward increasing function and restoring quality of life. An effective medication treatment plan requires a thorough medication history, including use of over-the-counter drugs and other supplements. Physicians should choose medications based on the source, type, and severity of patients' pain. Consideration should also be given to characteristics of the medication, as well as patients' age, comorbid conditions, use of other medications, and response to previous treatments. Physicians should alert patients to possible adverse effects from treatment. If a medication does not produce the desired therapeutic outcome, it should be tapered and discontinued. ■

Answers to This Issue's CME Quiz

Q1. B	**Q6.** A, B, C, D	**Q11.** B
Q2. C	**Q7.** C	**Q12.** A, B, C
Q3. A, D	**Q8.** B	**Q13.** A, B, C
Q4. B	**Q9.** B, C	**Q14.** D
Q5. A, B, C	**Q10.** B	**Q15.** C