Pain Solutions

Identifying Chronic Pain: Awareness Important

Debra Miller-Saultz, RN, FNP-BC, MS

Pain is the most common symptom leading to contact with healthcare providers. Research notes that one in four adults suffered day-long bouts of pain in the past month, and one in 10 had pain that lasted a year or more. Moreover, one-fifth of persons 65 years or older had an episode of pain lasting for more than 24 hours, and three-fifths had pain lasting for a year or longer. In the primary care setting, patients and providers were often not satisfied with treatments and outcomes. The lack of adequate diagnosis and treatment of chronic pain is now recognized as a public health crisis.

In 2007, Representative Lois Capp (D-CA) sponsored the National Pain Care Policy Act to address barriers that prevent adequate pain management by allocating funds to support pain research and the education and training of healthcare providers, and providing resources devoted to greater public awareness. The purpose of this article is to identify the patient with chronic pain, and define the need for a pain referral, various expectations, anticipated treatments, and coordination with the integration of care between primary care and pain medicine providers.

Classifications of Pain
Pain is a complex phenomenon defined by duration, origin, and whether it involves nociceptive receptors or neuropathic mechanisms. Nociceptive pain is pain originating from tissue damage or inflammation, and is characterized by the place of its origin (such as the bone, joint, muscle, skin, connective tissue, or organ). Nociception consists of four components: transduction, transmission, modulation, and perception. Neuropathic pain involves nerve dysfunction (see Pain Types).

Acute pain is pain resulting from disease or injury to tissue, has sudden onset and a short duration, and usually lasts for less than 3 months after treating the disease or injury. It can be either anticipated (postoperative) or unanticipated (trauma). Chronic pain is persistent, lasting longer than 3 months. If a patient has been treated with therapies that have failed to relieve pain, the next step is referral to a pain management provider. When making a pain referral, alert the referring provider of your working differential diagnoses, the treatments trialed, and recent lab or radiologic work up.

Pain Evaluation
At the initial pain evaluation, a comprehensive history and physical exam must be conducted. This exam includes a detailed history with a special focus on pain, including onset of pain, pain descriptors, provocative and palliating events, quality of pain, and quantity of pain as specified by pain intensity scores, radiation patterns, severity, and timing. Attention is directed to treatments and therapies already tried with outcomes, diagnostic work up, and evaluations by all specialties.

At the core of pain treatment is understanding the underlying diagnoses and defining its etiology. A useful tool for assessing etiology is VINDICATE: virus, inflammation, neoplasm, degenerative, ischemia, congenital, autoimmune, trauma, endocrine. Additionally, it is imperative to exclude undetected progressive illnesses, spinal cord, or nerve root compression conditions at the outset.

A review of spinal anatomy will be helpful in defining the sources of potential pain generators in the setting of back pain (see Lumbar Vertebra Superior View). The vertebral body allows distribution of compressive forces through the spine and provides support and a resting place for the intervertebral fibrous discs. The disc contains the outer concentric annulus fibrosus and central gelatinous nucleus pulposus. The paired transverse processes are oriented at almost 90 degrees to the spinous processes, and provide attachment for back muscles. Finally, there are four facet joints associated with each vertebra interlocking with the adjacent vertebra to...
provide stability and allow lateral and backward motion in the spinal column. Target structures and corresponding interventions may be used to diagnose and treat pain.

**Pain Therapy**

After defining the diagnosis and identifying the etiology, a multimodal treatment plan is suggested and trialed that may include pharmacologic, interventional, or psychological therapies. The key to effective therapy also depends on the identification of the pain generators, because nociceptive and neuropathic pain respond to different therapies.

Pharmacologic therapies are targeted to the pain generators. Nociceptive pain can respond to nonsteroidal anti-inflammatory drugs (NSAIDs), mild opioids, muscle relaxants, or...
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### erythromycin–quinolones

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<th>Drug Combination</th>
<th>Risk Rating</th>
<th>Severity</th>
<th>Onset</th>
<th>Likelihood</th>
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<tbody>
<tr>
<td>Erythromycin + Quinolones</td>
<td>1</td>
<td>Major</td>
<td>Delayed</td>
<td>Probable</td>
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</tbody>
</table>

**Cause**
The mechanism of this interaction is unknown.

**Effect**
The risk of life-threatening arrhythmias, including torsades de pointes, increases.

**Nursing Considerations**
- Avoid use of levofloxacin with erythromycin because doing so may prolong the QT interval.
- Use cautiously with gatifloxacin and moxifloxacin.
- Monitor ECG for prolonged QTc interval and arrhythmias.
- Tell the patient to report palpitations, dizziness, shortness of breath, and chest pain.
- Macrolides other than erythromycin may interact with quinolones. If you suspect an interaction, consult the prescriber or pharmacist.

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### erythromycin–pimozide

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<td>Major</td>
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**Cause**
Macrolide antibiotics such as erythromycin may inhibit CYP3A4 metabolism of pimozide.

**Effect**
The risk of life-threatening arrhythmias, including torsades de pointes, may increase.

**Nursing Considerations**
- Combined use of these drugs is contraindicated.
- Arrhythmias are related to prolonged QT interval, a known risk of pimozide.
- People with normal baseline ECG and no history of arrhythmias have died from pimozide blood levels 2.5 times the upper limit of normal from this interaction.

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corticosteroids. Neuropathic pain can respond to tricyclic antidepressants (TCA’s), anticonvulsants, local anesthetics, bisphosphonates, strong opioids, and interventional techniques.

In select patients with neuropathic pain syndrome, a spinal cord or peripheral nerve stimulator may be trialed to achieve analgesia. A spinal cord stimulator is an implantable device that works partially on the basis of the Gate control theory of pain. It comprises an electrode set in the epidural space that delivers electrical impulses perceived by the patient as paraesthesias in the area of pain, thus providing “masking” of pain.

In patients where pain control is limited secondary to high-dose opioid therapy and side effects, intrathecal medication delivery systems may be used. An intrathecal drug infusion pump delivers opioids and antispasmodics such as Baclofen. Ziconotide is a more recent FDA-approved drug. An intrathecal high-dose opioid therapy and side effects, intrathecal thus providing “masking” of pain.

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Once the patient has obtained adequate pain control, who should continue care? In many instances, therapy drives care. Care can be as complex as pain. Patients who have simple pain issues can have continued care for all their health issues, including pain by the primary care provider (PCP). The findings, diagnosis, and treatment goals set by the pain management provider are shared with the patient and PCP with the plan to integrate pharmacologic, physical, or psychological therapies. If the regimen is unsuccessful, the patient can be reevaluated by the pain management provider.

Many patients are reevaluated by the pain management provider on a routine schedule of every 1 to 3 months to adjust therapies and repeat interventions (such as epidural steroid injection, nerve block, or to adjust or refill an intrathecal pump), with continued care by the PCP.

In some cases, pain is complex and may not be well controlled or controlled on medications, including opioids that are beyond the scope of a PCP expertise. If there are comorbidities contributing to poor pain control, a multidisciplinary approach can be taken. This involves close monitoring dealing exclusively with pain. Patients may also be referred back to the PCP or to other specialties for needed care when appropriate.

REFERENCES

ABOUT THE AUTHOR
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