

# the painless messenger



The practitioner's  
resource for chronic  
pain management

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*"Definitely work-related"*  
Courtesy: New Yorker

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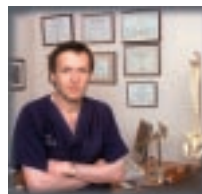
Dear Colleague:

Recently, I stumbled upon an article on chronic regional pain syndrome (CRPS, previously known as regional sympathetic dystrophy or RSD). This brief article was written by a neurologist lashing out at the interventional pain physicians (yes, I am one of them) accusing us of abusing aggressive procedures such as nerve blocks and spinal cord stimulators. Steroids, this doctor contends, should be the leading treatment in this condition.

The interventionalists who treat CRPS believe that early treatment with nerve blocks is essential in helping to prevent or lessen potential nervous system "rewiring." To make matters more complicated, the physical medicine doctors believe that without an active rehabilitation program, all treatments are futile. And truly, they are right as well. If you are brave enough to believe that CRPS is real (trust me, it is) what should you do? Who should you believe?

In a new field such as pain medicine (probably newer than any other specialty) a lot of topics are still controversial and open to debate: proper treatment for degenerative disc disease and how liberal should we be with oral opioid therapy are only a few dilemmas. At this point, there is a general gestalt in pain medicine with many variations. Until we have more evidence-based data, the controversies remain. The truth is probably somewhere in the middle, and a close and mutually respectful cooperation between various specialties is essential for patient well-being.

I promise to touch more on the CRPS controversy in our upcoming fall issue.



Thank you for your ongoing trust and support,

Julien Vaisman MD

Our current location, including the ambulatory surgical center, is at 10 Centennial Drive in Peabody. If you have comments or any topics of interest, please do not hesitate to contact us. Our website provides various methods of contacting us: [www.painandwellnesscenter.com](http://www.painandwellnesscenter.com).

## PSYCHOLOGICAL ASPECTS OF CHRONIC PAIN



by Peter Mosbach PhD

Chronic pain can be a significant source of emotional distress for people, placing them at risk for developing symptoms of depression and anxiety. There are a number of factors that can contribute to the presence of these psychological symptoms.

One major source of anxiety is the financial stress associated with being disabled. Many people with chronic pain are unable to work and have a significant loss of income. Income loss frequently produces strain in marital and familial relationships.

Worker's compensation and private disability programs typically pay 60 to 66 percent of a worker's prior wage, producing a significant loss of income. Individuals who do not qualify for worker's compensation or private disability

insurance can apply for social security disability (SSDI), but this typically takes 12 to 18 months to be approved. Individuals with chronic pain also have higher expenses due to their increased need for medical care. Dealing with the worker's compensation system, private disability insurers, and social security can also produce anxiety, as interactions with these agencies are often adversarial in nature.

Losing the ability to work can decrease self-confidence and self-esteem, which can cause or exacerbate depression. This can also lead to social isolation and loss of social support, since many people receive a significant proportion of their daily social interactions in the work environment.

Another factor that can contribute to emotional distress is the loss of sexual functioning experienced by many people with chronic pain. This can also lead to a reduced level of self-esteem and cause stress in relationships.

Chronic pain can exacerbate previously existing psychiatric symptoms. Individuals who have had psychiatric symptoms, including depression and anxiety, prior to their chronic pain problems are likely to experience a worsening of their pre-morbid condition. Thus, it can be useful to assess for the presence of pre-existing psychiatric disorders, because they are a risk factor for significant psychological symptoms in response to chronic pain.

What can be done about the increased risk of depression, anxiety and other psychiatric disorders among individuals with chronic pain? The first goal is to conduct an assessment by directly asking patients if they are experiencing any psychiatric symptoms (ie, difficulty sleeping, decreased libido, loss of appetite etc.) in response to coping with their pain. The use of cognitive behavioral pain management techniques has been shown to be helpful. In addition, relaxation training, using methods such as biofeedback, has also been shown to be helpful. Increasing social activities can also be useful. Medications including antidepressants and anxiolytics can add additional benefits.

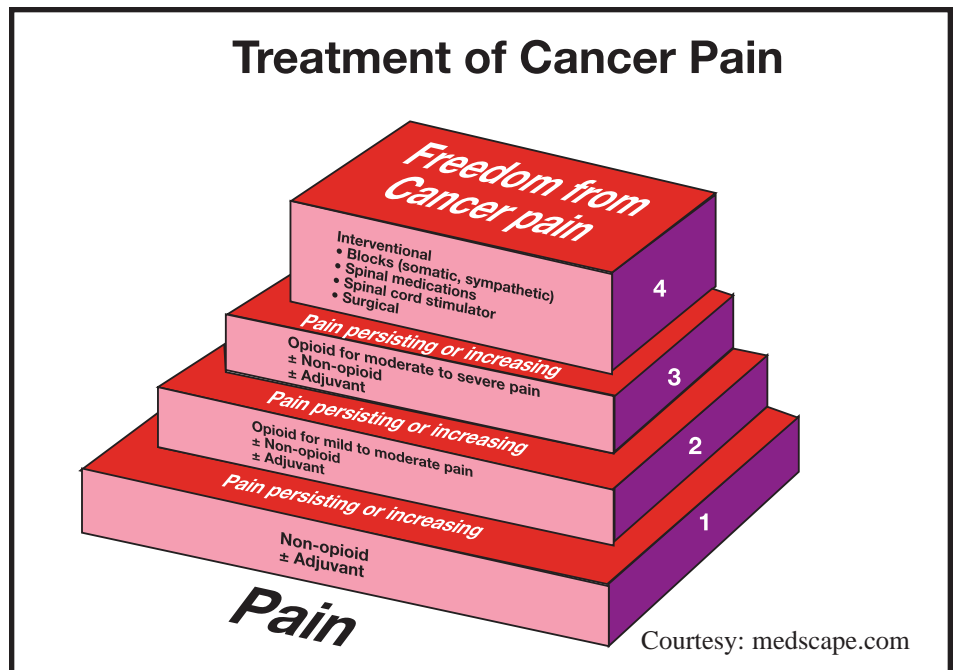
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## INTERVENTIONAL TREATMENTS FOR CANCER PAIN



by Aneesh Singla MD

Cancer has been identified as the leading cause of death in the United States, recently surpassing heart disease in mortality. Cancer also causes significant morbidity in the form of pain. This pain can be both visceral (pressure and distension) and somatic (nociceptive and sharp). Treatment for cancer pain can be



different than chronic nonmalignant pain, because of the potential for significant mass effect on tissues, neural invasion or metastatic tumor burden.

The World Health Organization (WHO) has published a three-step analgesic ladder that helps guide drug therapy for cancer pain. Pictured on page two, the three-step ladder describes a process in which pharmacotherapy is initiated and escalated in an effort to control pain. When medications at the third step of the WHO ladder have failed to control pain, interventional approaches to pain control should be considered. A fourth step has recently been considered to help treat patients who are not responsive to pharmacologic therapy alone. The diagram illustrates the three-step WHO ladder with the proposed fourth step added.

Interventional therapies for pain can be very successful in cancer patients particularly when pharmacologic therapy has failed. Some of these interventional techniques for cancer pain are described below.

- **Intralesional injections:** These injections (usually steroid and local anesthetic) are primarily done in the presence of pathologic fractures. They are generally effective for two weeks to two months, but results may vary depending on the clinical situation.

- **Sympathetic nerve blocks:** Selective blockade of a sympathetic ganglion or plexus is possible when that ganglion is thought to be responsible for transmission of visceral pain in cancer. For example, a celiac plexus injection could be used to relieve pain from a stomach, colon or pancreatic cancer. Blocks may be performed temporarily with local anesthesia, or permanent neurolysis can be done with alcohol or phenol. Radiofrequency lesioning of the plexus or ganglion has also been described in the literature.

- **Intrathecal drug delivery:** Intraspinal injection of opioids, local anesthetic or neurolytic agents (ie, alcohol or phenol) can achieve good pain control by block-

ing spinal dorsal horn sensory fibers. For patients with life expectancies of more than three months, implantable pumps have been shown to be cost-effective in controlling pain and reducing utilization of health services at the end of life. These pumps precisely deliver highly concentrated pain medications into the cerebrospinal fluid that acts directly on pain sensors in the spinal cord, particularly the dorsal horn and the dorsal root ganglion. These pumps are completely internalized systems and may be refilled with medications at regular intervals and are programmable.

- **Vertebroplasty:** Cancer patients will often have metastatic disease to the vertebral bodies resulting in compression fractures of the vertebrae. These can be very painful and may cause neurologic symptoms by spinal cord or nerve root compression. Using x-ray technology, cement can be injected percutaneously into the vertebral body and restore normal bone height and treat the pain from the compression fracture.

*Aneesh Singla, MD, is an anesthesiologist and a fellow in pain management at Brigham and Women's Hospital in Boston.*

## EPIDURAL STEROID INJECTIONS IN THE MANAGEMENT OF PAIN



by Emmanuel Emminike MD

The deposition of corticosteroid medication directly into the epidural space is used to treat pain due to nerve root inflammation and irritation. The most common indications are annular tears, disc herniation, spinal stenosis (central and foraminal) and spondylolisthesis. Epidural steroid injections (ESIs) can be performed at various levels in the spine (from the cervical to the caudal

regions) depending on the patient's symptoms and pathology.

ESIs can reduce the symptoms of nerve inflammation and irritation (pain, numbness and tingling). However, they are more effective for reducing pain and less so for other symptoms of nerve irritation. Epidural steroids work by inhibiting the release of inflammatory mediators in the early stages of the arachidonic acid pathway. The same mediators are involved in pain transmission. Local anesthetics (such as bupivacaine and lidocaine) are often injected along with steroids to offer immediate pain relief and reduction of numbness and other signs of nerve dysfunction. The onset of action for epidural steroid injections is generally between 24 and 72 hours. A positive response is at least 20 percent pain relief.

ESIs do not affect the rate of healing of an annular tear or a disc herniation. Minor disc disruptions and annular tears can heal naturally in about six months, and a series of two to three epidural injections can greatly reduce pain, allowing rehabilitation to proceed more easily. Best results from ESIs are seen in patients with annular tears and small disc herniations. ESIs are also often used after disc surgery for residual nerve root symptoms but with lower success rates due to scar tissue. Large disc herniations associated with weakness, spinal cord compression or bladder dysfunction need urgent surgical attention for surgical decompression.

After ESI, the majority of patients report at least a 20 to 50 percent reduction in pain. Other possible benefits include increased activity levels, reduced need for opioids and other pain medication, earlier return to work, greater independence, improved quality of life and reduced overall healthcare costs.

## TECHNIQUE

Access to the epidural space can be achieved by inserting the needle between the interspinous processes

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(translaminar approach) or through the neural foramen of the exiting spinal nerves (transforaminal approach). With caudal injections, the needle is introduced through the sacral hiatus. More advanced techniques will deploy a catheter to the target area via a caudal or foraminal approach.

All procedures are done under strict sterile conditions. Light intravenous sedation is an option for appropriate patients. The skin is surgically prepared and draped and the target point of entry is identified by fluoroscopy. The skin and needle track are anaesthetized with lidocaine. The needle is advanced under fluoroscopic guidance toward the target. Position inside the epidural space is confirmed by the loss of resistance with the translaminar approach or by an epidurogram with transforaminal and caudal approaches. The mixture of steroid (ie, triamcinolone) and local anesthetic (ie, 0.25 percent bupivacaine) or saline is injected slowly. Some patients may expe-

rience a sensation of mild pressure during the injection or reproduction of the sciatic pain.

Side effects from ESIs are usually mild but can include:

- mild numbness and tingling due to the local anesthetic (usually lasting two hours or less),
- short-term pain exacerbation when the local anesthetic wears off,
- transient hyperglycemia (in diabetics) and elevated blood pressure,
- generalized erythema and facial flushing or hypothalamic-pituitary-adrenal axis suppression when large amounts of steroids are used.

## COMPLICATIONS

Although rare, complications can occur with ESIs. Early complications include post dural puncture headache (PDPH), anaphylactic reaction and seizure. PDPH is a low-pressure headache that is worse with sitting and standing and relieved with lying flat. This

occurs in one to three percent of cases. Treatment involves keeping the patient flat, oral or intravenous rehydration, antiemetics and caffeine. With persistent or severe headaches an epidural blood patch is performed. Anaphylactic reactions to the agents used are extremely rare. Recently, paraplegia, seizures and death have been described after cervical transforaminal injections. However, in experienced hands, ESI remains a safe and effective treatment.

## TAKE HOME MESSAGE

Lumbar ESI (mostly transforaminal injections) have provided slight to moderate pain relief in controlled studies. However, they are markedly effective in preventing surgery. A descriptive study found that 46 percent of patients on a waiting list for disc surgery no longer required surgery after transforaminal injections.

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