South Miami Pain Center

ANESTHESIOLOGY • PAIN MEDICINE

ENRIQUE MURCIANO, M.D.
RAUL V. CHAO, M.D. • IGNACIO J. RODRIGUEZ, M.D.

About Us

We are a group of physicians offering full time interventional pain management in the South Florida Area. The goal of the physicians and staff of South Miami Pain Center is to improve and restore function and wellness of our patients. We provide appointments within 24 hours, paperwork in 48 hours and return calls within 24 hours. Our staff is available to answer any questions.

We have three locations:

6285 Sunset Drive
Miami, Florida 33143
~
7150 W 20th Avenue
Suite 209
Hialeah, Florida 33016
~
1423 Alton Road
Miami Beach, FL 33139

Centralized Scheduling
305-663-0631

Treatment Options for the Chronic Low Back Pain Patient

Part I

Overview of Chronic Low Back Pain

Chronic low back pain is considered the most costly non-fatal health condition in the United States and other industrialized countries. It is a leading cause of occupational disability and work lost time in persons 45 years of age and older. Most people will experience at least one episode of significant low back pain in their lifetime. An estimated 15-20% of low back pain (LBP) patients have a protracted recovery, with 2-8% developing lifetime chronic pain. Annually an estimated 2% of US workers have a compensable back injury (>500,000 employees). The yearly cost of LBP care exceeds 100 million for US employers in lost productivity, medical expenses, wage replacement, disability payments and other insurance costs.

The definition of low back pain is important. An acute episode of low back pain is resolution of symptoms before 12 weeks. Chronic LBP extends beyond that time. Soft tissue injuries of muscle and connective tissue usually heal in 6-12 weeks. For persons who have chronic LBP, traumatic and degenerative conditions are the most common causes. Other causes include osteoporosis, rheumatologic diseases, viral infections and congenital changes. Contributing factors to a slow recovery include obesity, poor posture, scar tissue from prior back surgery and recurrent injuries of the back.

Physiology of chronic vs. acute low back pain

Acute pain is considered a protective mechanism and has a defined cascade of chemical factors that are released when tissue is injured. Chronic pain development is not as clearly understood. The lumbar spine undergoes a number of physical changes over time because of the recurrent microscopic trauma as tissue is stressed. This leads to the breakdown of intervertebral disk and tears in the annular ring, causing herniation and nerve compressions. There can be swelling and bony overgrowth of the growth plates of the facet and vertebral bones. This leads to narrowing of the openings of the foramen where spinal nerves exit and narrowing of the canal (spinal stenosis).

Another cause of chronic pain of the back is inflammation of the intervertebral disk. This is a poorly understood biochemical process that involves neuropeptides (proteins) that causes inflammation and pain. Radicular pain from spinal nerves is also poorly understood but involves changes in to the covering of the nerve and its blood supply. Osteoporosis places older workers at risk for vertebral microfractures that can lead to the eventual collapse of the bone. An indirect cause of chronic low back pain includes fibromyalgia affecting the supporting muscles of lumbar spine. Treatment varies significantly depending on the source of the pain.

Chronic pain also differs from acute pain in that the perception of pain changes from pain at the site of injury to a more centralized process. There is a decreased pain threshold so that even light stimulation is perceived as painful by the central nervous system. Hypersensitivity can develop in a body region or extremity with a sensation of constant pain long after the original injury has healed.

South Miami Pain Center

ANESTHESIOLOGY • PAIN MEDICINE

ENRIQUE MURCIANO, M.D.
RAUL V. CHAO, M.D. • IGNACIO J. RODRIGUEZ, M.D.

About Us

We are a group of physicians offering full time interventional pain management in the South Florida Area. The goal of the physicians and staff of South Miami Pain Center is to improve and restore function and wellness of our patients. We provide appointments within 24 hours, paperwork in 48 hours and return calls within 24 hours. Our staff is available to answer any questions.

We have three locations:

6285 Sunset Drive
Miami, Florida 33143

~

7150 W 20th Avenue
Suite 209
Hialeah, Florida 33016

~

1423 Alton Road
Miami Beach, FL 33139

Centralized Scheduling
305-663-0631

Treatment Options for the Chronic Low Back Pain Patient

Part II

The first section of this newsletter discussed various etiologies and physiology that causes chronic low back pain. This section describes other issues involving chronic pain and a brief overview our understanding of the effectiveness of individual therapies that are common prescribed.

Barriers to recovery from chronic pain

There are a number of barriers to recovery from pain that may not always be physiological. Workers compensation literature describes a number of factors that complicate and/or exacerbate the person's healing and return to normal functioning:

- Co-existence of chronic health conditions such as heart disease and diabetes that may make them poor candidates for rehabilitation or surgery.
- Deconditioning occurs in many patients resulting in decrease in muscle strength, joint mobility and cardiovascular fitness.
- The presence of psychological diseases such as depression/dysthymia, predisposition to somatoform disorders, anxiety, personality trait disorders, and development of post-traumatic stress disorder.
- Traumatic brain injury prior to or as part of the injury can cause significant cognitive and emotional issues.
- Social barriers that include job dissatisfaction, dysfunctional family dynamics, legal involvement, financial issues because of loss of income, age-related factors, etc.

What we know about the effectiveness of treatment options?

There many types of interventions that are prescribed for reducing chronic pain. Most research supports the need to do combinations of therapies rather than rely on one approach only. The following is a brief outline of commonly used interventions and their known effectiveness when used alone:

- Medications: There are no standard guidelines on the use of analgesics, non-steroidal anti-inflammatory medications, antidepressants and opioids. There is a role for the use of narcotic medication in chronic pain management but monitoring is needed to prevent abuse and addiction. A complete discussion is beyond the scope of this article.
- TENS & Biofeedback – there have no evidence of effectiveness in chronic pain management.
- Traction, acupuncture, magnet therapy, trigger-point injections and hydrotherapy – no evidence of effectiveness in management of chronic pain.
- Manipulative therapy – more effective than sham treatment but not more effective than treatment by a concerned caring physician, physiotherapy or exercise.
- Massage therapy – slightly more effective than sham therapy but no more effective than physical therapy.
- Botulinum toxin injections – may have a future role, but no complete studies at this point in time for chronic pain management.
- Prolotherapy – injection of sclerosing agents into ligaments – no more effective than normal saline or lidocaine injections.
- Behavioral therapy – better than no therapy but not better than exercise therapy.
- Exercise therapy – effective intervention but no data that shows one type of therapy is superior to another.
- Surgical intervention for chronic low back pain - there needs to be the proper selection of patients who have an identifiable surgical lesion that would respond to corrective surgery.
- Spinal cord stimulators and intraspinal opioids are controversial and benefit depends on the selection of the right patient.
- Interventional procedures utilized by pain management consultants will be discussed in the next section of this newsletter.

South Miami Pain Center

ANESTHESIOLOGY • PAIN MEDICINE

ENRIQUE MURCIANO, M.D.
RAUL V. CHAO, M.D. • IGNACIO J. RODRIGUEZ, M.D.

About Us

We are a group of physicians offering full time interventional pain management in the South Florida Area. The goal of the physicians and staff of South Miami Pain Center is to improve and restore function and wellness of our patients. We provide appointments within 24 hours, paperwork in 48 hours and return calls within 24 hours. Our staff is available to answer any questions.

We have three locations:

6285 Sunset Drive
Miami, Florida 33143

~

7150 W 20th Avenue
Suite 209
Hialeah, Florida 33016

~

1423 Alton Road
Miami Beach, FL 33139

Centralized Scheduling
305-663-0631

Treatment Options for the Chronic Low Back Pain Patient

Part III

The preceding section of this newsletter discussed the effectiveness of individual therapies for treating chronic back pain. Other approaches to chronic pain management will be addressed in this segment. Case management issues will also be addressed.

Multidisciplinary approaches to chronic pain management

Research has shown that a combination of interventions such as exercise, education about chronic pain and behavioral therapy demonstrate increased benefit for improved outcomes and getting the patient back to work as compared to individual therapies. Most pain managements programs follow this model.

Reductionism

Other practitioners approach the chronic pain patient by aggressively pursuing a pathological/anatomical diagnosis for chronic pain. This approach is different than a monotherapy or multidisciplinary program because there is a reinvestigation of potential causes for the long-standing pain. Since, x-rays, MRIs, EMG/NCS, etc. may not show a definitive problem, the pain management specialist will use intra-articular blocks and discography in an attempt to localize the painful lesion. Treatment is focused on a specific cause. This differs from other approaches that do not depend on a specific diagnosis or localization before starting treatment.

There are a number of interventional treatments that do not require open surgery. Pain management specialists have training and experience in the following procedures:

- Intra-articular blocks of the facet joints with methylprednisone
- Medial branch blocks of the facet joint are used for both diagnostic and therapy. This procedure helps most patients initially and gives moderate long term pain relief.
- Radiofrequency medial branch neurotomy – temporary block to the nerve that innervates the facet. This nerve can regenerate but overall this provides long-term relief for most people.
- Epidural injections directly place medication near the involved nerve root and provides short-term pain relief in most and 70%, long-term.
- Epidural adhesiolysis is a technique that disrupts epidural adhesions. This is done by injecting a volume of normal saline into the area, followed by a steroid. This is a higher risk procedure with more complications.
- Intradiskal therapies for inflamed intervertebral disks that are thought to be the source of pain. Available procedures include IDET, percutaneous laser disk decompression, percutaneous radiofrequency annular neurolysis and nucleoplasty. The purpose of these procedures are to shrink the collagen fibers of the disc and coagulate neural tissues.

Case Management Issues

Case management of chronic low back pain is challenging for all parties. The following are suggestions about managing this type of claim:

1. There are no one proven treatment(s) that delivers a predictable outcome when treating chronic low back pain
2. Adjuster or nurse case manager should discuss the treatment plan with pain specialist before treatment. A monotherapy approach will not produce an optimum outcome. The multidisciplinary model is preferred.
3. Reductionism approach may be appropriate if there is no definite cause identified in routine evaluation.
4. Adjuster should establish a line of communication with the specialist's office so that information exchange is optimized.
5. Pain management specialists should always include return-to-work as part of the overall treatment program.