



Treatments for Pain

IDET

IDET stands for intradiscal electrothermal annuloplasty and involves the placement of a small wire catheter into a previously determined painful disc of the spine. IDET has become a therapy for discs that are painful from annular tears. The procedure is performed under X-Ray guidance and, once the catheter is in place within the disc, a protocol of gentle heating is begun to help reduce the pain coming from annular tear. Patients that are candidates for IDET have had discography to determine which discs are painful. The procedure can take around 60 minutes to perform.

Epidural Steroid Injections

An epidural steroid injection is a procedure that involves the placement of a small needle into the epidural space to deliver an anti-inflammatory medication that is a derivative of cortisone. This injection attempts to address problems created from herniated discs, spinal stenosis and radiculopathies. The injection is performed under X-Ray guidance and can be through various routes, whether it be through an interlaminar, transforaminal or caudal approach. The approach elected by the physician is based on patient anatomy, patient symptoms and previous history. This procedure takes only a few minutes and patients usually resume their daily routine afterwards.

Racz Catheter Lysis of Adhesions

The Racz catheter is a small caliber, flexible catheter that is introduced into the tailbone under X-Ray guidance. The tailbone has a small opening at the bottom of the vertebral column, known as the sacral hiatus, which allows entrance into the epidural space. The Racz catheter can be placed into the epidural space through the sacral hiatus and can break up adhesions that may have been caused by surgery as well as deliver steroid medication into the epidural space. Patients that are candidates for this procedure have usually had surgery or have severe degenerative processes affecting the lower back.

Radiofrequency of Medial Branches

A medial branch radiofrequency neurotomy is a non-surgical procedure that involves a process of localized heating through a probe and disrupts the conductance along tiny nerves that transmit pain from the facet joints (the joints in the back of the spine). Patients that are candidates for radiofrequency neurotomy have been through previous diagnostic examinations that involve numbing the medial branches with a local anesthetic. By numbing the medial branches, the facet joints can then be determined to be the source of the patient's pain. The radiofrequency neurotomy disrupts the signal from the painful joints in question and relief can be obtained for as long as 4 months to 2 years. The procedure is done under X-Ray guidance and can take several minutes to perform.

Sacroiliac Joint Injection

A sacroiliac joint injection is an injection that can be performed under X-Ray guidance in which a small caliber needle is placed into the sacroiliac joint. The sacroiliac joint is the joint formed between the pelvis and spine and can often be a source of lower back pain. The injection can be performed with a small amount, usually 1 milliliter, of steroid and can be accompanied by an equal amount of a local anesthetic.

Occipital Nerve Blocks

Occipital nerve blocks are injections that involve an anti-inflammatory medication with a local anesthetic for patients that suffer from occipital headaches. Occipital headaches are observed in the distribution of the greater occipital nerve and are predominantly located in the back of the head. These injections can be performed in the office, and the patient, after a few minutes of observation, can return to their daily routine afterwards.

Stellate Ganglion Blocks

Stellate ganglion blocks are injections performed under X-Ray guidance to anesthetize the stellate ganglion, a collection of sympathetic nerve fibers that come together at the base of the neck. Patients who are candidates for this injection suffer from sympathetically mediated pain, most commonly from a condition called complex regional pain syndrome (also known as reflex sympathetic dystrophy) that affects the upper limbs. The injection involves a small to medium amount of local anesthetic that numbs these sympathetic fibers that are maintaining a painful state of one of the upper limbs. By numbing these nerves, the patient is able to achieve some relief, often enough to participate in physical therapy and achieve a greater functioning of the painful limb.

Lumbar Sympathetic Blocks

Lumbar sympathetic blocks are injections performed under X-Ray guidance to anesthetize the lumbar sympathetic chain, a collection of sympathetic nerve fibers that come together in the middle of the lumbar spine. Patients who are candidates for this injection suffer from sympathetically mediated pain, most commonly from a condition called complex regional pain syndrome (also known as reflex sympathetic dystrophy) that affects the lower limbs. The injection involves a small to medium amount of local anesthetic that numbs these sympathetic fibers that are maintaining a painful state of one of the lower limbs. By numbing these nerves, the patient is able to achieve some relief, often enough to participate in physical therapy and achieve a greater functioning of the painful limb.

Discography

Discography is an injection technique under X-Ray guidance that is used to evaluate patients with back pain who have not responded to other conservative therapies. Discography involves the placement of needles within the intervertebral discs and applying small mechanical stresses such as pressure to assess the integrity of the disc. This examination also provides information regarding whether or not the disc or discs in question are causing the patient's pain. Discography can also yield information regarding the internal shape and structure of the disc. Common uses of discography include determining whether the patient is a candidate for the IDET procedure as well as for

surgical planning prior to a vertebral body fusion. Discography is done as an outpatient procedure.

Facet Joint Injections

Facet joint injections are performed under X-Ray guidance and involve placement of an anti-inflammatory medication, which is related to cortisone, within the facet joint (the small joints that are located in the back of the spine). Typically, these injections address pain that is coming from these joints after minor trauma. Patients typically experience either neck or back pain that is worse with extension. The procedure can be performed in several minutes and patients usually resume their daily activities later that day.

Trigger Point Injections

Trigger points, more commonly known as muscle knots, are areas of localized tension or tightness within a muscle. These areas can cause pain that travels to surrounding areas of the body and can be felt as bands of thickened muscle tissue or nodules. Trigger point injections are an in-office procedure traditionally performed using a local anesthetic and fine needle movements to release these nodules within a muscle. The procedure is safe and generally well tolerated by patients. The most common side-effect is mild discomfort at the injection site. The procedure takes a few minutes to complete and patients can return to work or other activities that day.

Neuromodulation

Neuromodulation or spinal cord stimulation transmits low-level electrical signals that can interfere with the pain signals, which start in the extremities and keep those signals from being perceived in the brain. The stimulation substitutes the painful sensation with a mild tingling sensation that the patient can control with an external remote control. Patients who typically are candidates for this procedure have suffered chronic pain and have not been responsive to other extensive conservative measures such as anesthetic blocks and epidural steroid injections. The procedure involves a trial period with a temporary stimulator, which involves a small wire lead that is implanted beneath the skin and over the spinal cord. The lead is connected to a small battery, which sends out small pulses of electrical activity that interfere with the patient's painful sensations. If this trial period is successful, the patient will then be a candidate for surgical implantation, which involves the placement of a small battery beneath the skin. The temporary and surgical implantation can take from 1 to 2 hours. Your physician will determine whether or not a patient is a candidate for this procedure.

Implantable Infusion Devices

Implantable infusion devices such as a morphine pump provide intrathecal drug delivery of opioid medication into the cerebrospinal fluid, the fluid that surrounds the spinal cord. The medication works by attaching itself to certain receptors within the central nervous system and blocking the transmittance of pain signals. Patients who typically are candidates for this procedure have suffered chronic pain and have not been responsive to other extensive conservative measures such as anesthetic blocks and epidural steroid injections. Patients are also assessed from a psychological perspective for depression and

may involve psychometric testing. Furthermore, the prospective candidate must undergo an intrathecal trial of morphine. This is an injection of morphine within the intrathecal space in which the potential pain relief is assessed, and if determined to be significant, the patient may be a candidate for permanent implantation of an intrathecal drug delivery system which consists of an intraspinal catheter and infusion pump. The intrathecal trial of morphine takes 30 minutes to perform and the permanent implantation is a surgical procedure that can take 60 to 90 minutes. Your physician will determine whether or not a patient is a candidate for this procedure.

Medication Management

Your physician has a wide selection of medications to choose from which to manage a patient's symptoms including anti-inflammatory, neuropathic and narcotic medications. Anti-inflammatory medications might be used if a patient has pain from an inflammatory source such as an acute herniated disc. Such medications include over the counter medications such as ibuprofen to more recent prescription medications such as cox-2 inhibitors like celecoxib. Neuropathic medications might be used if a patient has more of a nerve-mediated pain such as that from a radiculopathy (sometimes called sciatica). Such medications may include gabapentin and amitriptyline, among others. Narcotic medications may be considered if a patient fails other medications and has a debilitating chronic pain syndrome. Patients who are to be considered for narcotic therapy must undergo psychological screening for depression (or other mood disorders) since narcotic therapy may contribute to worsening of symptoms. Your physician will determine what medications are appropriate and will discuss that with each patient.