

LYSIS OF EPIDURAL ADHESIONS UTILIZING THE EPIDURAL APPROACH (RACZ EPIDURAL ADHESIOLYSIS)

INTRODUCTION

Bleeding into the epidural space following surgery or leakage of disc material following breakage or a tear of a disc most commonly causes epidural scarring. Presumably, inflammation and compression of nerve roots by epidural scar (Adhesions) are the mechanism of persistent pain following back surgery, ruptured or herniated discs, or vertebral body fracture. Epidural scar may also contribute to the pain of spinal column metastatic carcinoma, failed facet joint syndrome, and unexplained neck or low back pain.

DIAGNOSIS

Conventional studies such as myelograms, computerized tomography (CT Scans), and magnetic resonance imaging (MRI), are usually inadequate to make the diagnosis. Injection of contrast material (dye) into the epidural space yields an "epidurogram", which is diagnostic for the presence or absence of epidural scar tissue.

PROCEDURE

Since further surgery would only produce more scar tissue, a different approach to the problem needs to be taken. "Lysis of Epidural Adhesions" (Breakage of scar tissue) is an alternative to this problem. The procedure consists of introducing an epidural catheter (thin plastic tube) into the epidural space (space between your spinal cord and the walls of the spinal canal, within your backbone). Once in place, medications are injected through this tubing in order to break the scar tissue. Although the catheter is placed within fifteen to twenty minutes, it is kept in the epidural space for a couple of hours. During this time, the injection of medications through the tubing is performed. At the end of the procedure the catheter is removed and the patient discharged to home.

CONDITIONS USUALLY TREATED WITH THIS MODALITY

 Conditions include, but are not limited to:

- Failed Back Surgery Syndrome
- Post-Laminectomy Syndrome
- Epidural Adhesions
- Back and leg pain
- Sciatica
- Radiculopathy
- Neck and arm pain
- Leg pain
- Disc disruption
- Traumatic vertebral body compression fracture
- Degenerative arthritis of the spine
- Facet pain
- Epidural scarring following infection
- Occipital neuralgia
- Others

SIDE EFFECTS AND POSSIBLE COMPLICATIONS

Everything in medicine is subject to side effects and possible complications. No two patients are alike. Side effects and complications are not the same or equivalent to malpractice. Malpractice refers to an injury sustained by a patient, which occurs as a consequence of negligence in the practice of medicine. Side effects and complications, on the other hand, are untoward events, which can occur and may injure a patient, in certain percentages of the population. These events can, and do occur even if everything goes according to plan, and in the absence of negligence or malpractice. Possible side effects and complications of this procedure include, but are not limited to.

- Pain or worsening of symptoms
- Infection (local = abscess; or generalized = sepsis), including meningitis and death. Infection due to a steroid-induced immune system suppression.
- Bleeding, including hematomas, which might compress the spinal cord, therefore causing paralysis.
- Nerve damage, including sensory or motor weakness, and/or paralysis. Nerve damage, ranging from minor nerve irritation with pain, to major nerve damage with paralysis, impotence, urinary incontinence, and/or fecal incontinence.

- Allergic reactions ranging from a minor rash to an anaphylactic reaction and death
- Failure to relieve pain
- Spinal cord compression leading to paralysis
- Breakage of catheter (tubing)
- Unforeseen events:

GUARANTEES THAT IT WILL HELP

None. There are no guarantees in medicine.

RESULTS OF TREATMENT

93.9% of patients will experience some pain relief, which will be variable. 6.1% will experience no relief.

DURATION OF RESULTS

Only 12.3% will experience persistent pain relief beyond 12 months. 57.9% of male patients and 64.4% of female patients will experience between 0-3 months of variable degrees of pain relief.

FREQUENTLY ASKED QUESTIONS

WHAT IS THE INCIDENCE OF COMPLICATIONS?

It is unknown. Most complications occur sporadically and are reported as isolated case reports.

CAN THE PROCEDURE BE REPEATED WHEN AND IF MY PAIN RETURNS?

Yes. The effectiveness of subsequent repeat procedures is also variable. Some patients obtain longer duration of pain relief while others obtain shorter duration.

DOES THIS REQUIRE THAT I BE HOSPITALIZED?

No. On the average the procedure takes anywhere from 1 to 3 hours to complete.

WHAT SHOULD I EXPECT TO FEEL AFTER THE PROCEDURE?

If the procedure is successful, you should experience pain relief of variable degrees.

WILL I OBTAIN COMPLETE (100%) PAIN RELIEF?

Although possible, it is our experience that patients suffering from chronic pain, the cause of the pain is multifactorial, and therefore, highly unlikely to completely address the problem with only one type of therapy.

WHAT IS AN EPIDUROLYSIS (RACZ) PROCEDURE?

Epidurolysis (RACZ) Procedure is used to dissolve some of the scar tissue from around entrapped nerves in the Epidural space of spine, so that medications such as cortisone can reach the affected areas. Dr. Gabor Racz pioneered this procedure.

WHAT CAUSES SCARRING (ADHESIONS)?

Scarring is most commonly caused from bleeding into the Epidural space following back surgery and the subsequent healing process. It is a natural occurrence following surgical intervention. Sometimes scarring can also occur when a disk ruptures and its contents leak out.

WHAT IS THE PURPOSE OF IT?

To allow medications to reach affected nerves so that pain and other symptoms may be diminished.

HOW LONG DOES THE PROCEDURE TAKE?

First, a small catheter (surgical tube) is inserted in the Epidural space up to the area where the scar is located. This is done under sterile conditions using x-ray guidance. This epidural catheter is secured to the skin using tape and the patient is transported to the recovery room. This part may take 45 minutes. While in the recovery area, series of medications will be injected via the catheter. This part may take 1.0 to 2.0 hours. The patient is kept in the recovery room for the duration of the procedure. Once all medications are

injected, then the catheter is removed. The actual injections only take a few minutes, however, the procedure protocol calls for certain periods of time to elapse between the administration of medications.

WHAT IS ACTUALLY INJECTED?

The injection consists of a mixture of a local anesthetic (numbing medicine), a steroid (anti-inflammatory medication), radiological contrast dye (to visualize the scar tissue), hyaluronidase (medicine to soften the scar), and a hyper-concentrated solution sterile salt water (to remove fluid from the swollen nerves via osmosis).

WILL THE INJECTION HURT?

Patients receive intravenous sedation and local infiltration of numbing medicine to minimize the discomfort from the procedure. Because the procedure involves the insertion of a needle, some discomfort is to be expected. In addition, because there is scar tissue and swelling inside of the epidural space, as the medications are injected, the sensation of pressure should be expected.

WILL I BE "PUT OUT" FOR THIS PROCEDURE?

No. This procedure is done under local anesthesia and sedation, which makes the procedure easy to tolerate. The amount of sedation given generally depends upon the patient's tolerance. Communication with the patients during the procedure is essential to avoid complications.

HOW IS THE PROCEDURE PERFORMED?

Catheter placement is done with the patient lying on their stomach. During the procedure, the patient is monitored with a heart monitor, blood pressure monitor, and a blood oxygen monitoring device. The skin in the back is cleaned with antiseptic solution and then the procedure is carried out. After the procedure, you are placed on your back or on your side. X-rays are used to assist in the placement of the catheter and to perform the epidurogram (injection of radiological contrast to confirm adequate placement).

WHAT SHOULD I EXPECT AFTER THE INJECTION?

Immediately after the injection, you may feel your legs slightly heavy and numb. Also, you may notice that your pain may improve or disappear. This may only last for a few hours and it is due to the local anesthetics (numbing medicine).

WHEN CAN I RETURN TO WORK?

Unless there are any complications, you should be able to return to work the next day. However, it may take a couple of days for you to get the full benefit of the procedure.

HOW LONG THE EFFECTS OF THE MEDICATION LAST?

The immediate effect is usually from the local anesthetic injected. This wears off in a few hours. The cortisone starts working in about 5 to 10 days and its effect can last for several days to a few months. The benefits from the procedure may last as long as 6 months.

HOW MANY TIMES DO I NEED TO HAVE THIS PROCEDURE PERFORMED?

If the first procedure does not relieve your symptoms within one to two weeks, you may be recommended to have one more procedure. After this, we recommend 6 months between RACZ procedures.

WILL THE EPIDUROLYSIS (RACZ) PROCEDURE HELP ME?

It is very difficult to predict if the procedure will indeed help you or not. Generally speaking, the patients who have recent scarring (e.g. following back surgery) respond better.

WHAT ARE THE RISKS AND SIDE EFFECTS?

Generally speaking, this procedure is relatively safe. However, with any procedure there are risks and possible complications. These include, but are not limited to: spinal headaches; central nervous system infections such as meningitis, or epidural abscesses; epidural hematomas with possible spinal cord compression and subsequent permanent paralysis; worsening of symptoms; failure to provide relief; nerve damage; urinary or fecal incontinence; blood vessel damage, etc. Side effects related to the steroids, such as: weight gain; increase in blood sugar (mainly in diabetics); water retention; suppression of body's immune system; mood disturbances, etc.. Some of

patients may have anaphylactic allergic reactions to hyaluronidase. Fortunately, the serious side effects and complications are uncommon.

WHO SHOULD NOT HAVE THIS PROCEDURE?

If you are allergic to any of the medications to be injected, if you are on a blood thinning medication (e.i. Coumadin), or if you have an active infection going on, you should not have the injection. The following are absolute contraindications for performing epidural adhesiolysis:

1. Sepsis
2. Chronic infection
3. Coagulopathy (Bleeding disorder)
4. Local infection at the procedure site
5. Patient refusal
6. Syring formation
7. A relative contraindication is the presence of arachnoiditis.

HOW DO I PREPARE FOR THE PROCEDURE?

1. Do not eat or drink for 6 hours before the procedure.
2. If you take blood pressure medication in the morning, take it as usual, with just a sip of water.
3. Take a shower the morning of the procedure using an antibacterial soap such as "Right Guard".
4. Take a 1000 mg Vitamin C every day, before and after the procedure to build up your immune system and decrease the risk of infections.
5. You may drink water up to 2 hours before the procedure.
6. Empty your bladder before getting your IV started.