

LUMBAR DISC SURGERY

Purpose

This booklet is designed to be an information source for you concerning your lumbar disc surgery. It is not meant to replace any personal conversations that you might wish to have with Dr. Kitchel, his assistant, his office, or other members of the health care team. My hope in preparing this booklet for you is that it will answer some of your questions and serve as a stimulus for you to ask appropriate questions about the surgery.

General Overview

Lumbar disc surgery has been performed safely around the world for nearly 80 years. It is indicated for the treatment of herniated intervertebral discs which have failed to respond to conservative treatment or are creating a progressive neurologic deficit.

In recent years, a number of alternative treatments have come to light. The first of these was injection of the disc with an extract of papaya enzyme called chymopapain. This gained great popularity in this country during the late 70's and early 80's. However, as the long-term results became available and were able to be reviewed, it became apparent that there were several problems with the procedure. The first of these was that there was a significant incidence of allergic reactions to the papaya enzyme. These reactions were, at times, very serious and even led to death. The second problem is the extreme toxic effect that the enzyme has if it is inadvertently injected around a nerve rather than into the disc space. The injection of a nerve with chymopapain can cause paralysis. The third, and most significant problem with chymopapain, is the success rate. In a large retrospective analysis of the results from chymopapain injection, it was found that only 70 to 80 percent of people achieved good long-lasting results. For these reasons, chymopapain is not being widely used in this country at this time.

Another alternative to open lumbar disc surgery in this country is percutaneous discectomy. This entails putting a tube into the disc and inserting a small probe through the tube which will aspirate or suck out the disc. This has the benefit of requiring no open incision and of often being able to be performed as an out-patient procedure. This procedure is still investigational and few long-term results are available for review. It also has definite limitations with the sort of disc problems that can be treated with this technique. Large disc herniations, disc herniations with significant neurologic deficits, and disc herniations which have free pieces of disc outside of the disc space cannot be successfully treated with this technique. Dr Kitchel is proceeding very cautiously with this technique and only using it in a small number of his patients. If you would like, he would be happy to discuss it with you further.

The newest alternative is laser surgery. This is still experimental and while it has some promising short-term results, Dr. Kitchel feels it is not yet well enough understood to be used routinely. Dr. Kitchel has been trained in this technique and will be happy to discuss it with you.

Indications for Surgery

The indications for lumbar disc surgery are the presence of a herniated lumbar disc proven by radiologic studies accompanied by pain that has been unremitting to conservative treatment or numbness and weakness in the leg. In most cases, some attempt is made at conservative treatment with medications, physical therapy, and possible bracing before surgery is suggested. The exception to this is the case in which there is a progressive problem with numbness or weakness in the leg which is threatening to become permanent or severe enough to compromise the use of this extremity.

The treatment of pain with this surgery is generally limited to pain that puts unacceptable limitations on your lifestyle. This is normally pain in the distribution of the sciatic nerve from your buttocks and down your leg. Loss of nerve control such as numbness or weakness in the legs and accompanying loss of bowel or bladder control are also indications for this surgery.

Preparation for Surgery

There are a number of things that will allow you to have a better result from your surgery by preplanning them before the surgery is done. The most important of these is that you go into the surgery with a complete understanding of what is to be done and a positive attitude that you are taking the right step. This is best accomplished by being sure that all of your questions are answered. Please do not hesitate to contact Dr. Kitchel or his assistant with any questions which you think may be too foolish or too trivial to bother them with. We truly want you to understand the procedure at length and to have all of your questions answered.

You should be sure that Dr. Kitchel is aware of any health problems which you may have or medications that you are taking before surgery. He may want to stop some of the medications, because of the possibility that they can increase your bleeding at the time of surgery. He may also ask you to see your family doctor or internist so that they can pronounce you fit and a good candidate to undergo the surgery. It is also possible that other medications may interact with the anesthesia and the anesthesiologist may ask you to modify how you are taking them.

If you are a smoker, it is advisable that you attempt to stop or taper off your smoking before the surgery. Inhaling smoke irritates the breathing tubes and may lead to respiratory problems during and after surgery. In addition, there is an increased rate of infection and postoperative wound problems in smokers.

It is desirable that your body be in the best possible condition for surgery. Your heart, lungs, and spine need to be as strong as possible. It is possible that Dr. Kitchel may recommend a program of aerobic strengthening or stretching exercises before surgery. It is also possible that you may be asked to see a physical therapist before surgery to show you a conditioning exercise program.

Lumbar disc surgery in general does not require blood replacement. Except in rare instances, there will be no need for you to have a transfusion. If Dr. Kitchel feels there is a possibility that you may need blood after your surgery, he will ask you to store some of your own blood ahead of time to avoid the transmission of blood borne diseases such as hepatitis or AIDS. If you are asked to store your own blood, you will be given nutritional supplements such as iron and calcium to maintain your blood balance.

Surgery

For lumbar disc surgery, you are admitted to the surgery center or hospital the morning of surgery. It is no longer necessary for you to come into the hospital the night before. This allows containment of costs at the time of surgery and also allows you to have a good night's rest at home before you enter the surgery center or hospital. It is important that you do not eat or drink anything after midnight the night before surgery. This will allow the anesthesia to be safely administered.

Once you have been admitted to the surgery center or hospital, you will be taken to a room and prepared for surgery. This will include instruction about the surgery, cleansing of your back, as well as instruction about the postoperative period. In most instances, you will have spoken with the anesthesiologist before your admission to the hospital and have decided on the type of anesthesia. Dr. Kitchel has no preference as to the type of anesthesia and this should be worked out between you and the anesthesiologist so that you are both comfortable that it is being administered in the safest possible fashion.

About one-half hour before the surgery is actually to begin, you will be taken up to the operating room and put into a holding area. The anesthesiologist will come and visit you and start your IV at that time. You will then be taken to the operating room and anesthesia will be induced. Once the anesthetic has been successfully administered, you will be positioned for the surgery and surgery will be carried out.

After surgery you will wake up in the recovery room where your vital signs will be monitored and your immediate postoperative condition will be carefully watched. Most people stay in the recovery room between one and three hours after surgery. Once the anesthesiologist feels that you are doing well, you will be returned to your room in the hospital or allowed to go home from the surgery center. The evening of surgery, it is normal for your back to be sore. If you stayed in the hospital, the nursing staff will be checking to make sure that your vital signs are stable and that there is no problem with either the wound or nerve function in your legs. Dr. Kitchel will be by to see you the after the surgery to discuss how the surgery went and make sure that things are going as expected.

Most patients are up and out of bed within an hour or two after surgery. It is important to get you out of bed early to avoid the complication of blood clots forming in the legs or possible breathing problems associated with remaining in bed. The recovery room nurse or physical therapist will come in and help you make sure that it is an easy transition from lying to walking. Dr. Kitchel has prescribed a specified program of walking and exercises for the first few days after surgery. The physical therapist will take you through this gently and utilize their expertise.

Your intravenous catheter will remain in place until you leave the surgery center or hospital. This is to give you adequate fluids as well as antibiotics in

an attempt to lessen any chance of infection. You will also be taking pain medication through your IV for the first couple of hours. After that, the pain medication will be given by mouth.

The dressing will be changed before you go home and if a small drain tube was left in the incision, it will be removed. Once the drain tube has been removed, you are free to shower and the wound will be left uncovered.

Most patients go home from the hospital or surgery center on the day of surgery. Dr. Kitchel will see you in the recovery area and discuss with you the medications to take home as well as a prescribed program of activities. In general, you should do no bending, heavy lifting, or stooping at home until you are seen back in the office by Dr. Kitchel. You should take your medications as he prescribes. Be sure that Dr. Kitchel answers all of your questions before you go home from the hospital or surgery center.

Generally, Dr. Kitchel will see you back in the office about one week to ten days after surgery to inspect your wound. If, during that first week of surgery, you have any questions or problems, you should call him at the office immediately.

The Operation

Lumbar disc surgery attempts to relieve the symptom of leg pain, numbness, and weakness by removing whatever is irritating or compressing the spinal nerve. This is generally accomplished through a posterior incision over the back with partial disc removal. An incision is made down the midline of the back. The muscles are moved out of the way to expose the posterior aspect of the spine. A small amount of bone and ligament is removed to expose the area of the nerve root and disc. The nerve root is then protected and the disc is removed. The entire disc is not removed because this would change the biomechanical structure

of your back. Only the portion of the disc which is compressing on the nerve and any other free loose fragments are removed. Once this has been accomplished, the wound is washed out and sewn shut. The actual removal of bone and ligament to gain access to the nerve root and disc is called a laminotomy or laminectomy. The actual removal of the disc is called the discectomy. This is performed by forming a window in the outer portion of the disc and then working through that window to try and remove the herniated portion. A microscope is used for magnification and to provide superior light. There is no fusion performed in conjunction with disc surgery in most cases. Dr. Kitchel will speak with you specifically if he believes a fusion is indicated.

Risks and Complications

Your decision to undergo surgery should not be made lightly. You need to understand that there are certain risks and complications which accompany any surgical procedure. Thankfully, complications in lumbar disc surgery are rare. The most common complication is an infection. This occurs in approximately 1 to 2 percent of all spine surgery. Dr. Kitchel will do everything he can to avoid this complication. A sterile scrub will be performed on your back and the operation will be performed in a sterile room. Gloves, gowns, and masks will be worn by all personnel in the room. You will be given antibiotics for the first few days following surgery. Despite all of these precautions, infection does occasionally occur. Infection is generally not a devastating complication, but may require that the patient come back into the hospital for further antibiotics and possibly to reopen the wound. If you have any personal history of susceptibility to infections, this should be communicated to Dr. Kitchel prior to surgery.

The complication of blood loss is rarely significant in lumbar disc surgery. The general blood loss is less than 1/2 cup. It is very rare to require any replacement of blood. In extremely unusual cases, a major blood vessel may be damaged requiring repair through an abdominal incision. In these cases, blood loss may be life threatening.

New nerve damage or spinal cord damage is the rarest of all complications. This occurs in approximately 1/1000 cases. If there is new damage to your nerve, it could result in numbness, tingling, weakness, or pain in the leg. In all likelihood it would not result in any permanent paralysis.

The risks of anesthesia should be covered in your conversation with the anesthesiologist. It is up to you to be sure that you are comfortable with the form of anesthesia which you have chosen. Dr. Kitchel has no specific preference for whether you go all the way to sleep or have a spinal block.

Expectations After Lumbar Disc Surgery

The desired result of your lumbar disc surgery is to eliminate your leg pain and allow the numbness and weakness in your leg to resolve. The earliest result to be expected is the lessening of the pain. This will often be difficult to tell in the immediate postoperative period because your back will be painful from the surgery. However, most patients notice that within a day or two the leg pain has significantly diminished. It is not unusual during the first few weeks after surgery to have waxing and waning of the leg pain with some occasional jolts of severe pain. This should not scare you or make you think that the old pain is returning. The return of the muscle function in your leg will be somewhat slower. You should not anticipate that this will return as quickly as the pain goes away. A general rule of thumb is that the strength will return over about the same course of time that it took to lose it. In other words, if you have had weakness in your leg for six to eight weeks before surgery, it will take six to eight weeks after surgery to regain that strength.

The slowest thing to return is any loss of sensation or feeling in the leg. This will return very slowly and is often discouraging to patients. You can anticipate that it will be several months before the sensation returns. In some

cases, all sensation may never return. This is because the sensation is the most sensitive portion of the nerve and in some cases will never fully recover.

When you first go home from the surgery center or hospital, the best form of therapy is simply daily activities and walking. You should not be engaged in any heavy lifting, bending, or stooping. You will find that frequent changes in your position will help your back to be more comfortable. Once Dr. Kitchel feels that your wound is adequately healed, he will start to increase your activities. The first of these will be a walking program. Once there has been further wound healing you will begin a supervised physical therapy program of exercises to restrengthen your back. During this initial phase at home, Dr. Kitchel will be seeing you in the office about every two weeks to check on how you are doing.

When You Go Home

Dr. Kitchel will plan with you your discharge from the surgery center or hospital ahead of surgery. If you spent the night in the hospital, they prefer that you go home in the morning before 11:00 a.m. That morning, Dr. Kitchel will come in and visit you to answer any questions as well as discuss your take-home medications and an appointment to see him back in the office.

When you get home, it is important to maintain moderate physical activities. You should not overdo it but by the same token you should not spend all your time in bed or sitting.

You will have medications to take home as they are ordered by Dr. Kitchel. It is important that you take all of this on the schedule which he has provided you. His assistant will call you within a day or two of your discharge to make sure everything is going okay.

Unless Dr. Kitchel has specifically told you otherwise, it is all right to shower and cleanse the wound. Simply dry the wound well after showering. It is not necessary to cover the wound unless there is any drainage.

Reasons to Call Dr. Kitchel After Surgery

1. New pain, weakness, or numbness that begins when you get home.
2. Fever, headache, or extreme fatigue.
3. Drainage from the wound that was not present at the time of being discharged from the hospital.
4. Difficulty with bowel or bladder control.
5. Any questions about your surgery which were not covered in your conversations with Dr. Kitchel, his assistant, or by this booklet.

The office telephone number is 393-0100. There is someone available at the office from 8:00 a.m. to 5:00 p.m. on weekdays. There is also a physician available on-call 24 hours a day, 7 days a week. Please do not hesitate to call if you have any questions.

Again, this booklet is not designed to replace your personal communication with Dr. Kitchel or his assistant. It is simply meant to serve as a reference about lumbar disc surgery and to answer any questions you might have. Each procedure is different and the specifics of your operation will vary depending on your exact condition, the schedule, and Dr. Kitchel's other responsibilities. I hope that it will help to ready you for your surgery and allow you to enter into it with a good understanding.

A WORD ABOUT PAIN MEDICATION

The use of oral pain medication continues to be a difficult and controversial problem in postoperative patients. It is certainly my primary concern that we give you enough medication to make you comfortable in the perioperative period. However, when you go home from the hospital, consideration must also be given to limiting that pain medication because of its side-effects and addictive nature.

I want to take this opportunity to make you aware of the policies of Orthopedic Spine Associates. First, no pain medication prescriptions will be refilled after business hours or on weekends. This requires that you look ahead and plan the use of your medication such that should you need additional medications you can call during regular office hours between Monday and Friday. Second, it is also our policy that oral pain medications not be continued beyond six weeks following surgery. There are certainly extenuating circumstances which will be considered on an individual basis. However, in general, the use of oral pain medication following surgery will be limited to six weeks. There is good scientific evidence to support this limitation based both upon the potential for addiction as well as the ineffectiveness of chronic oral pain medications.

I would be happy to sit down and discuss either of these policies with you on an individual basis. I do not mean this sheet to take the place of any personal conversation. However, I do believe it is my obligation to make you aware of these policies so that we can have the best possible doctor-patient relationship.

MEDICATION PROTOCOLS FOR DR. KITCHEL'S PATIENTS

Preoperative Medication Protocol

1. Discontinue NSAIDs 7 to 10 days preop.
2. Patient may receive Darvocet-n 100 for that time period

Postoperative Medication Protocol

1. Oxycodone or equivalent 1 to 2 every 4-6 hours as needed
2. Ibuprofen 800 mg three times a day (may be taken in addition, if tolerated)
3. Hydrocodone 7.5 or Vicoprofen 1 to 2 every 4-6 hours as needed
If Hydrocodone is given, may continue NSAID
4. Hydrocodone 5 mg 1 to 2 every 4-5 hours as needed
5. Darvocet-n 100 1 to 2 every ~4-6 hours as needed
6. Ultram 50 mg 1 to 2 every 4-6 hours as needed

NO NARCOTICS AFTER SIX WEEKS.