

CERVICAL DISC SURGERY

Purpose

This booklet is designed to be an information source for you concerning your cervical disc surgery. It is not meant to replace any personal conversations that you might wish to have with Dr. Kitchel, the nursing staff, his office, or other members of the healthcare 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

Cervical disc surgery has been performed safely around the world for nearly 70 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. It may also be used for neck pain which has not responded to conservative, non-operative care.

There are two general approaches to disc surgery in the neck. The first of these is a posterior operation with removal of only the portion of the disc pinching on the nerve. The alternative is surgery from the front of your neck with removal of the entire disc and fusion of the adjoining vertebra, or replacement of the disc with a biomechanical device. Dr. Kitchel will discuss both procedures with you and select the one most appropriate for your individual problem. In general, more cervical discs are treated with the anterior surgery and fusion because of the more predictable long-term result of this procedure.

There are a number of alternatives to disc surgery in the low back which are not available in the neck. These include injection of the disc with an enzyme to dissolve it and percutaneous or arthroscopic surgery. These procedures are

applicable to the lumbar spine, but are either ineffective or unsafe in the neck. Dr. Kitchel will be happy to discuss them with you.

Indications for Surgery

The indications for cervical disc surgery are the presence of a herniated cervical disc proven by radiologic studies accompanied by pain that has been unremitting to conservative treatment or numbness and weakness in the arm. Alternatively, a badly worn disc, causing neck pain, imaged with MRI may be fused or replaced. 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 arm 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 cervical nerve from your shoulder and down your arm. Loss of nerve control such as numbness or weakness in the arms and accompanying loss of bowel or bladder control are also indications for the 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 being answered. Please do not hesitate to contact Dr. Kitchel or his nurse with any questions which you think may be too foolish or too trivial to bother them with. They truly want you to understand the procedure at length and to have all 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 try 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. If fusion is done in your case, smoking decreases the rate of solid fusion and a good result.

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.

Cervical disc surgery in general does not require blood replacement. Except for 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 cervical 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 the patient to have a good night's rest at home before they 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 body, as well as instruction about the postoperative period. In most instances, you will have spoken with the anesthesiologist before your admission to the surgery center or 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 yourself and the anesthesiologist so that you are both comfortable that it is being administered in the safest possible fashion.

About 1/2 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 discharged home if your surgery

was done at the surgery center. The evening of surgery, it is normal for your neck 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 arms. Dr. Kitchel will be by to see you after the surgery to discuss how the surgery went and make sure that things are going as expected. You will not be allowed to eat or drink until you are wide awake. This is because the esophagus, or food tube to your stomach, was retracted upon during surgery. This will occasionally cause problems with coughing or gagging if you try to swallow large amounts too soon. The recovery room nurses will check your swallowing after surgery and start you on food and drink.

If you had a fusion done, when you wake up after surgery, you will notice that your cervical collar is snugly in place. The idea of this is to stabilize your neck. It should not be tight enough to choke you or make it difficult for you to breathe; however, it is important that it is snug enough to immobilize your neck. Your collar must remain comfortably in place at all times, except when showering.

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 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 are discharged after surgery. 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 hour or two. After that, the pain medication will be given by mouth.

The dressing will be changed before you are discharged and a small drain tube which is may be left in the incision will be removed at that time. Once the drain tube has been removed you are free to shower and change the dressing each day. Once any wound drainage has stopped, you may leave the wound uncovered. Your collar must stay comfortably in place at all times, except when showering.

Most patients go home from the surgery center within a couple of hours of surgery being completed, or the hospital on the morning after surgery. Dr. Kitchel will see you in the hospital that morning and then 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 Dr. Kitchel answers all of your questions before you go home from the hospital that morning.

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

The Operation

Disc surgery aims to relieve the symptoms of arm pain, numbness, and weakness by removing what ever is irritating or compressing the cervical nerve. This is accomplished either by partial disc removal from the back of the neck or complete discectomy and fusion from the front.

In the anterior surgery, the neck incision is made across the side of the anterior portion of the neck. The muscles are moved out of the way to expose the anterior esophagus, or food tube, as well as the trachea, or breathing tube.

These are then carefully retracted out of the way to expose the front of the spine. An x-ray is taken to ensure that the proper disc is removed. Once the correct level has been selected, the entire disc is removed by sharply cutting it away from the bone. Once this has been accomplished, a plug of bone from a cadaver or a plastic cage is inserted into the space which the disc had occupied. The wound is then washed out and sewn closed

Once the wounds have been closed, dressings are applied. The cervical collar is then applied snugly to your neck. You are awakened and moved to the recovery room.

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 cervical spine surgery are very rare. The most common complication is an infection. This occurs in approximately 1-2% of all spine surgery. Dr. Kitchel will do everything he can to avoid this complication. Your neck and hip will be sterilely scrubbed 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 several days around the time of surgery. Despite all 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 before surgery.

The complication of blood loss is rarely significant in cervical disc surgery. The general blood loss is less than 1/2 cup. It is very rare to require any replacement of blood. If Dr. Kitchel feels that you are at risk to lose more blood,

then you will be asked to predonate some of your own blood ahead of time so that it may be stored and used at the time of surgery.

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, or pain in the arm. If your spinal cord is damaged, it is conceivable that you could be paralyzed.

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 Disc Surgery

The desired result of your cervical disc surgery is to get rid of your arm and/or neck pain and allow the numbness and weakness in your arm 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 neck and hip will be painful from the surgery. However, most patients notice that within a day or two the arm pain has significantly diminished. It is not unusual during the first few weeks after surgery to have waxing and waning of the arm 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 arm 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 arm 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 arm. 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 hospital or surgery center, 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 neck to be most 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 be allowed to get out of your collar and begin on a supervised physical therapy program of exercises. During this initial phase at home, Dr. Kitchel will be seeing you in the office about every two weeks to x-ray your neck and check on how you are doing.

When You Go Home

If you spend the night in the hospital, Dr. Kitchel will generally tell you the evening before he plans to dismiss you the next morning. The hospital prefers 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 arrange for 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 nurse 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. Simply dry the wound well after showering. If you are in a collar, you may remove it to shower. Once this has been accomplished, replace with a dry collar and go about your further drying and dressing. It is not necessary to cover the wound unless there is any drainage from the wound.

Reasons to Call Dr. Kitchel After Surgery

1. New pain, weakness, or numbness that begins after 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. Difficulty with swallowing or hoarseness which seems to get worse rather than better.
6. Any questions about your surgery which were not covered in your conversation with Dr. Kitchel 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 including weekends. 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 nurse. It is simply meant to serve as a reference about cervical disc surgery and to answer any questions which you may 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 Orthopedic Spine Associates policies. 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 one month following surgery. There certainly are 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 one month. 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.