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ANESTHESIA FOR CHILDBIRTH

One of the most thrilling events in a woman's life is the birth of a child. However, along with the excitement there is often anxiety about the birthing process, especially concerning the pain of labor and delivery. Over the past several years there have been significant advances in the field of pain control for women during childbirth. This pamphlet has been designed to familiarize you with some of these developments, allowing you to approach your baby's birth without the fear of undue pain. We at Southwest OB/Gyn Assoc, LLP., hope that this information will answer any questions that you may have, and will help make having your baby a happy and fulfilling experience.

OBSTETRICAL ANESTHESIA

In addition to your obstetrician, pediatrician, and nurses, there are anesthesiologists in the hospital to help you during your labor and delivery. Anesthesiologists are physicians who have specialty training in pain management techniques and in the care of patients undergoing surgery. A significant portion of this training is devoted to treating pregnant women. Anesthesia is provided exclusively by Board Certified or Board Eligible anesthesiologists and there is an anesthesiologist in the hospital 24 hours a day, 7 days a week.

ANESTHESIA AND ANALGESIA

Analgesia is the relief of pain. This may be full or partial relief and it may be accomplished in several ways. **Anesthesia** is the blockage of all sensation and may not be accompanied by loss of consciousness.

Your medical condition, the progress of your labor, and your personal preferences will all be considered by your obstetrician and anesthesiologist when determining the type and extent of pain relief to be delivered to you. The primary concern of everyone involved in your care is the well-being of you and your baby, and you can rest assured that your physicians will allow you to receive medications in the amounts and at the times during labor that will be the safest for your baby. There are four methods that are commonly used by women in coping with labor pain:

Prepared Childbirth – This refers to breathing and relaxation techniques that are taught in childbirth education classes. By attending these classes, parents become much more knowledgeable about the birthing process, and this in itself helps by reducing the anxiety associated with labor and delivery. Some patients use these techniques throughout their entire labor, but most patients request medication at some point during their labor. Therefore it is important to remember that if you plan to have “natural” childbirth and you ultimately request medication, this should in no way be construed as a failure because **every labor is different**.

Analgesic Medications – These are pain-relieving drugs, such as Stadol, that are injected into a muscle or a vein. These medications reduce your pain, but do not completely eliminate it. Because these medications tend to make both you and your baby sleepy, they are usually given during early labor to help you conserve the energy that you will need later.

Local Anesthesia – This refers to the injection of anesthetic medications into the rectal and vaginal areas by your obstetrician just before the baby is delivered. These medications cause numbness in the vaginal and rectal areas. This technique is used to ease the pain of delivery or when an episiotomy is required to assist in childbirth. Local anesthesia does not relieve any of the pain due to contractions.

Regional Anesthesia – When medications that are injected into one area of the body cause a larger portion of the body to be anesthetized, it is called regional anesthesia. In obstetrical patients regional anesthesia refers to spinal blocks and epidural blocks.

These blocks are administered by an anesthesiologist and involve the injection of local anesthetics and other medications into your lower back. These medications reduce or eliminate pain and other sensation in your abdomen and legs.

Epidural anesthesia can be used for labor, vaginal delivery, and Cesarean section. On the other hand, spinal anesthesia can be given in the delivery room for a vaginal delivery or Cesarean section, but is rarely used during labor.

EPIDURAL ANALGESIA FOR LABOR

Epidural analgesia has become very popular for pain control during labor and delivery, and it is by far the most common method chosen by women who receive anesthesia for childbirth. An epidural block provides pain control during labor and can be continued after delivery. The biggest advantage of epidural analgesia over other techniques is that it provides pain control without sedating the mother or baby. This allows the mother to participate more fully in the birthing process because she is neither sedated by drugs, nor exhausted from having to cope with the pain of labor.

How is an epidural given?

An epidural block is given in your lower back, at about the level of your belly button. The injection is given between the vertebra in your spine while you are either sitting up or lying on your side. In order to separate the vertebra and make the procedure easier, your nurse will help you curl up as much as possible while the anesthesiologist performs the epidural block.

Before your anesthesiologist begins, he or she will clean your skin and will numb the skin where the epidural block will be done. The anesthesiologist will then use a special needle to locate the epidural space, which is just outside the sac that contains spinal fluid. All that you should feel during this time is a pressure sensation, and many patients compare the pain of the epidural to the pain of having your IV started.

Once the epidural space is located, your anesthesiologist will begin giving you medication. After the initial dose of anesthetic is given, the anesthesiologist will insert a tiny flexible plastic tube (the epidural catheter) through the needle. As the epidural catheter is inserted, it may brush against a nerve and cause a brief tingling sensation down one leg. This causes no damage to the nerve, and it goes away after a few seconds.

When the catheter is positioned, the needle is removed from your back and the catheter is taped in place. Additional medications can be given through the catheter. The medication surrounds the nerves and “blocks” the painful impulses caused by your contractions.

How long does it take for the epidural to work?

With proper patient cooperation, the epidural anesthetic can usually be administered in 5 to 10 minutes. The onset of pain control is gradual, and you will usually begin to have some decrease in your labor pain about 10 minutes after the drug is injected. However, it takes about 20 minutes for the full effect of the epidural block to develop.

When can I get an epidural?

An epidural block is administered when your labor is well established with regular contractions and the cervix is dilating. The exact time for the epidural is determined by your anesthesiologist and obstetrician, but for most women who are having their first baby it can be administered when the cervix is 5 to 6 centimeters dilated, and may be given slightly earlier if you have had a vaginal delivery before. Remember this is only a rule of thumb and the timing of your epidural block will depend on the circumstances of your individual labor.

From time to time, an emergency or some unexpected problem may require the immediate attention of your anesthesiologist. In the unlikely event that this occurs, your epidural may be delayed or it may be necessary for you to use another form of pain control. This is usually only a temporary problem and we make every effort to administer your epidural block.

How much will I feel?

In most cases complete elimination of all sensation is not desirable for you and your baby. You will still get significant pain control, but you may feel pressure similar to the squeeze of a blood pressure cuff with your contractions, and you may feel the examination by your nurse or obstetrician. Depending on the situation, your anesthesiologist will adjust the intensity and level of analgesia; generally for control of labor pain you will become numb to around the area of your belly button. Frequently when the epidural block is initially administered your legs become numb and heavy. This is a temporary feeling and it usually goes away within an hour or so.

Soon after your vaginal delivery, the epidural catheter will be removed and within a few hours the numbness will be completely gone.

Will the epidural block slow down my labor or delivery?

As with any medication, people respond differently to epidural medications. Occasionally there may be a temporary decrease in uterine contractions. However, by waiting until your labor pattern is well established, the chance of this is minimized. On the other hand, many women are pleasantly surprised to find that after the epidural block controls their pain, they relax and their labor progresses even faster.

Epidural analgesia allows you to rest during the longest part of labor, which is when the cervix is dilating. Then, when your cervix is completely dilated and it is time to “push”, you will have plenty of energy in reserve. In most cases women find it easier to push if they have some sensation with their contractions, therefore, your anesthesiologist may want you to feel your contractions as pressure across your abdomen or in your rectum. Even if you do not feel your contractions you will still be able to push with instruction. If your baby needs to be delivered using forceps or a vacuum instrument, the epidural catheter allows your anesthesiologist to intensify the block so that you have further loss of sensation.

Are there any risks to me or by baby?

Through the years, it has been shown that epidural blocks are usually safe for both mother and child. However, there are certain skills, precautions, medical judgments, and treatments that are required to make the procedure as safe as possible; this is why only qualified anesthesiologists perform epidural blocks.

The most common potential side effects of epidural blocks are low blood pressure and shivering. To prevent and/or treat a decrease in blood pressure, your anesthesiologist will order IV fluids to be given, and he or she may give medication to increase your blood pressure. In addition, whether or not you receive an epidural block, you will be positioned on your side throughout labor so that the uterus does not compress the major blood vessels in your abdomen. Finally, you should stay in bed until the numbness is completely gone after delivery.

Shivering is a common reaction to epidural anesthesia, although it sometimes occurs during labor and delivery even if you did not receive any anesthetic medication. Keeping you warm may help decrease the shivering, and it usually resolved after about 20 minutes.

Some women are concerned about developing a backache after receiving an epidural block, but studies have shown that there is no difference in the incidence of backache among pregnant women regardless of the type of anesthetic they receive.

Another common question about epidural blocks involves the risk of nerve damage. In the past, nerve damage usually occurred because of preservatives in the medications, or from the solutions used to sterilize the reusable needles and catheters. Using the techniques, disposable equipment, and drugs that are available today, the risk of nerve damage due to an epidural block is exceedingly low.

On rare occasions, the sac that contains the spinal fluid may be punctured during the procedure. If this occurs, you may develop a headache after your delivery. The headaches last a few days and can often be treated by simply lying flat, drinking fluids, and taking pain tablets. Once in a while additional treatment may be required if the headache persists. You can help decrease the chance of developing a headache by holding as still as possible while the epidural block is administered.

During pregnancy the veins located in the epidural space become swollen, thereby increasing the risk that the anesthetic medication could be injected into them. If a large amount of medication is given into a blood vessel, it can cause convulsions, and even cardiac arrest or death. To guard against this highly unlikely occurrence, your anesthesiologist gives the medication in small, divided doses, and may ask you if you notice any unusual tastes, ringing in your ears, a rapid heart rate, or sudden numbness.

To prevent and treat all of these possible adverse reactions, your anesthesiologist will carefully evaluate you and your baby's condition before, during and after the epidural block is administered.

ANESTHESIA FOR CESAREAN SECTION

Epidural, spinal or general anesthesia may all be safely used for Cesarean sections. The decision regarding the type of anesthesia to be used depends on your preferences and on the circumstances.

Can my labor epidural catheter be used for a Cesarean delivery?

If you receive an epidural block during labor and ultimately require a Cesarean section, your anesthesiologist can almost always use the epidural catheter to inject much stronger medication. This stronger medication will completely numb your abdomen up to about the level of your breasts. You can then remain awake during the delivery, and the child's father is encouraged to come into the operating room so that he can share the childbirth experience with you. If you did not have an epidural catheter inserted during the labor there may be time to perform the epidural block for the Cesarean section if you and your baby are medically stable.

An additional advantage of epidural anesthesia over spinal or general anesthesia for Cesarean delivery is that the catheter may be left in place to provide pain control for 24 to 48 hours after surgery. When this is done, the medication is

adjusted so that analgesia is achieved without numbness, and you may safely walk around and may breast-feed your baby without undue pain from the surgical incision.

What is spinal anesthesia?

Spinal anesthesia, like epidural anesthesia, is produced by injecting medication into your lower back. With spinal anesthesia the anesthetic drug is injected directly into the sac that contains the spinal fluid. This quickly produces very intense numbness and muscle weakness in your legs and abdomen. Because of the rapid onset of numbness, spinal anesthesia is sometimes used when there is not enough time to establish an epidural block. Occasionally, a headache may develop after spinal anesthesia. It is treated in the same way as the headache that may occur after an epidural block.

What about general anesthesia?

When general anesthesia is used, your anesthesiologist injects medication into your IV that rapidly produces complete unconsciousness. Because it is so fast, general anesthesia is typically used for emergency Cesarean deliveries, but it may be used for non-emergency Cesarean sections when it is deemed best for medical or personal reasons. In these cases general anesthesia has proven to be quite safe for the baby.

One of the most dangerous problems during general anesthesia is caused by food or liquid in the mother's stomach. Pregnancy and labor slow down the activities of your stomach and intestines, therefore you almost always have undigested food and acids in your stomach throughout labor and delivery. When you are under general anesthesia there is a chance that these could come back up into your mouth and get into your lungs where they can cause severe damage. In order to protect your lungs, your anesthesiologist places a breathing tube into your mouth and windpipe after you are asleep. You may also receive an antacid and other medications to neutralize the stomach acid before having a Cesarean section.

In order to decrease the chances of having a significant amount of food in your stomach, it is important to remember that **YOU SHOULD NOT HAVE ANYTHING TO EAT OR DRINK AFTER YOU BEGIN HAVING LABOR PAINS**. Regardless of your plans for delivery and pain control, do not assume that you will not need an anesthetic.