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PROCEDURE EDUCATION LITERATURE

We recommend that you read this handout carefully in order to prepare yourself or family members for the proposed procedure. In doing so, you will benefit both the outcome and safety of the procedure. *If you still have any questions or concerns, we strongly encourage you to contact our office prior to your procedure so that we may clarify any pertinent issues. "An educated patient is the best patient."*

LAPAROSCOPY

This explanation of "laparoscopy" describes no specific operation. Rather, it is intended as a supplement to the *Procedure Education Literature* that you may have received in the event that part or all of your procedure/surgery is going to be performed with laparoscopic technique. Throughout this pamphlet, we will refer to your "primary pamphlet" as the one describing your particular operation or procedure.

Definition

The surgical procedure that popularized laparoscopy is tubal sterilization. Over the past decade, laparoscopy has become increasingly popular for more complex gynecologic surgeries as well. Cystectomy (removal of an ovarian cyst), oophorectomy (surgery to remove an ovary), hysterectomy (removal the uterus), and management of ectopic pregnancy are often performed laparoscopically. Some surgeons may perform incontinence surgeries in this fashion.

As opposed to a laparotomy (traditional open surgery through an incision), laparoscopy involves performing surgery through a few very small holes in the abdomen. Through these holes, a camera and other instruments are placed, and the surgeons visualize the procedure on a television screen. With advances in camera optics (quality of the picture), laparoscopic instruments, and laparoscopic technique, many traditional operations can be performed entirely or partially in this fashion.

Preparation

Like any traditional open abdominal procedure, it helps the surgeon if your small intestines and colon are empty. You should avoid constipating foods (i.e. rice, bananas, red meat) for a few days prior to your procedure). Eat a lot of fruits and vegetables.

It is necessary, as with any procedure or operation requiring anesthesia that you have not eaten for at least eight hours prior to the scheduled time. Depending on the particular procedure, we may ask you to clean out your small intestine and colon the night before. **If we ask you to do so, instructions will be included in the primary literature pamphlet.* An empty gastrointestinal tract facilitates the surgery and may also make you far more comfortable in the post-operative period. You should plan a light lunch and early, very light dinner the day prior. For the remainder of the evening, it is important to continue to drink plenty of clear fluids, but you CANNOT eat. You may drink up until midnight but *not* after and *not* in the morning of your scheduled surgery.

This paragraph is just to reiterate what is already printed on the primary literature pamphlet* If you are on medications that must be taken, you will have discussed this with us and/or the anesthesiologist and instructions will have been given to you. The procedure will not be performed if you are currently taking, or have recently taken any medication that may interfere with your ability to clot your blood ("blood thinners, aspirin, anti-inflammatory medicines, etc..."). The most common of these medications are aspirin and all related pain relievers or anti-inflammatory compounds (whether prescription or over-the-counter). *Please refer to the attached list and tell us if you took any of these within the past 10 days.*** If your new medication is not on the list, alert us immediately so that we may ensure optimal procedure safety. We will have reviewed all of your current medications with you during the preoperative/pre-procedure consultation. You are obligated to inform us if anything has changed (medication or otherwise) since your previous visit.

Procedure

Please refer to the primary literature pamphlet. Laparoscopic procedures are performed under general anesthesia (complete sleep). The procedure differs from open surgery in that there will be anywhere from two to five small (less than one inch) incisions carefully placed on your abdomen instead of one larger incision.

After the camera is placed in an initial incision (usually near the belly button or navel), the abdominal cavity is inflated with a gas (carbon dioxide) to

lift the abdominal wall away from the intra-abdominal or pelvic organs. This elevation provides the necessary space to perform and properly visualize the operation. The pressure of the gas in the abdominal or pelvic cavity is monitored to prevent high pressures. Small instruments are then placed (under camera vision) through other small carefully positioned incisions into the abdominal or pelvic cavity. The camera projects the picture onto a television screen. The remainder of the procedure is fairly identical to the steps described in the primary pamphlet. After the surgery is complete, the instruments are removed and each of the holes are sutured close. Sterile bandages are put over the small incision sites.

Post Procedure

After the procedure, you will be in the recovery room until you are ready to be discharged or moved to a regular room (if you are being admitted). This will have been discussed with you prior.

There will be small dressings over each of the small incision sites. If a longer incision was made it will be covered with a larger bandage. *Otherwise, the "post procedure" expectations are the same as those in the primary pamphlet.*

Expectations of Outcome

The purpose of laparoscopy is to help minimize post-operative pain, hospital stay, and overall recovery. In most instances, this is accomplished. In many, but not all surgeries, actual operative time is also reduced. However, in some operations, operative time may be the same or even greater as compared with an open operation.

In any laparoscopic surgery, your surgeon will have told you that there is a chance of "**conversion**" to an open procedure. This means that a laparoscopic procedure has to be changed to an open operation. The indication to do so may be one of two scenarios. The first is that there are findings (scarring, unexpected anatomy) that prevent the surgeon from completing the procedure effectively or safely. The second is that a complication occurs during laparoscopy that we feel would be more effectively and/or swiftly handled through a larger, formal incision. ***Conversion is a decision made by the surgeon that is in the patient's best interest, and it should not be considered to be a complication. It simply means that your surgery will be completed in the open fashion by which most surgeries are performed.***

Possible Complications of the Procedure

All surgical procedures (open or laparoscopic), regardless of complexity or time, can be associated with unforeseen problems. They may be immediate or even quite delayed in presentation. You should refer to the *primary pamphlet* describing your particular surgery for the complete list of complications. Some of those listed below are particular to laparoscopy, while others are already listed in your *primary pamphlet*. While we have discussed these and possibly others in your consultation, we would like you to have a list so that you may ask questions if you are still concerned.

**Laparoscopic technology and instrumentation have evolved tremendously over the past decade. As you read below, bear in mind that complications particular to laparoscopy (subcutaneous emphysema, tension pneumoperitoneum and pneumothorax, pneumomediastinum, pneumopericardium, and gas embolism) while possible, are unusual.*

- **Blood Loss/Transfusion:** Significant blood loss is rare with laparoscopic procedures. Uncommonly, small or large blood vessels can be injured during placement of the instruments into the abdominal cavity or during the dissection. Minor to moderate bleeding can usually be controlled through the laparoscope. More severe bleeding may require conversion to an open procedure. If severe bleeding occurs, transfusion could be necessary.
- **Organ Injury:** During initial placement of the instruments or during any part of the dissection, any organ in the abdomen or pelvis (liver, spleen, colon, intestine, bladder, stomach, ureter, etc.) can be inadvertently injured. Often, the problem can be treated through the laparoscope. In other instances, conversion to an open operation may be necessary. Treatment depends on the particular organ injured and the severity of the injury. These are described in your *primary surgical pamphlet*.
- **Subcutaneous Emphysema:** In rare instances, the carbon dioxide gas (CO₂) can escape into the subcutaneous (below the skin) tissue plane. In the post-operative period, this would present with minor to severe swelling and bruising (depending on the amount of gas in the tissue). The gas eventually gets reabsorbed by the body, and the swelling and bruising resolve with time.
- **Tension Pneumoperitoneum:** The pressure of CO₂ gas in the peritoneum (intra-abdominal space) is carefully monitored, and there are short intermittent fluctuations of no consequence. Sometimes, the pressure can remain high for a prolonged period. In this instance, the elevated pressure can push upward on the chest cavity and cause problems with proper ventilation (breathing). This may result in blood pressure fluctuation and problems with the heart. In rare instances, high intra-abdominal pressures can result in a tension pneumothorax (collapse of the lung due to high surrounding pressures (see pneumothorax below).
- **Gas Embolism:** This unusual problem results from a significant amount of CO₂ gas getting into the blood vessels. The result can be changes in heart rhythm and blood pressure. While cardiac arrest (complete stop of the heart) is possible, it is highly unusual.
- **Pneumothorax (Collapse of the Lung):** This can occur if one of the instruments is inadvertently placed in the thoracic (chest) cavity or if dissection opens a small hole in the pleura (chest cavity lining). A chest tube (lung cavity drain) would be placed that will be removed in a few days. There are rarely long-term complications as a result. If this is not recognized however, Carbon Dioxide gas can force its way into the cavity outside of the heart and lung blood vessels (pneumomediastinum) or even directly around the heart (pneumopericardium). These very rare complications can be life threatening and require immediate attention in an intensive care setting.
- **Deep Vein Thrombosis (DVT)/Pulmonary Embolus (PE):** In any operation (especially longer operations), you can develop a clot in a vein of your leg (DVT). Typically, this presents two to seven days (or longer) after the procedure as pain, swelling, and tenderness to touch in the lower leg (calf). Your ankle and foot can become swollen. ***If you notice these signs, you should go directly to an emergency room and also call our office.*** Although less likely, this blood clot can move through the veins and block off part of the lung (PE). This would present as shortness of breath and possibly chest pain. We may sometimes ask the medical doctors to be

involved with the management of either of these problems.

- Urinary Tract Infection or Urosepsis (bloodstream infection): Although we may give you antibiotics, it is still possible for you to get an infection. It may be a simple bladder infection that presents with symptoms of burning urination, urinary frequency, and a strong urge to urinate. This will usually resolve with a few days of antibiotics. If the infection enters the bloodstream, you might feel very ill. This type of infection can present with both urinary symptoms and any combination of the following: fevers, shaking chills, weakness or dizziness, nausea, and vomiting. You may require a short hospitalization for intravenous antibiotics, fluids, and observation. This problem is more common in diabetics, patients on long-term steroids, or in patients with disorders of the immune system.
- Wound Infection: As with any incision, an infection can occur. This would present with unusual redness, swelling, and/or drainage (white to yellow thick fluid) from any of the small incisions. Usually, these are easily managed with antibiotics. In some instances, an incision needs to be opened for adequate drainage. An abscess is an infection collection in the body. It can present with the same symptoms as sepsis and usually requires drainage. *If you have symptoms suggesting any of the above after your discharge from the hospital, you must contact us immediately or go to the nearest emergency room.
- Ileus or Bowel Obstruction: Because we operate near the intestines, they can go into prolonged spasm (ileus), or they may become blocked (obstruction). Treatment ranges from observation to open surgery.
- Hernia: Although the small incisions are sutured closed, it is possible to develop a small hernia (tissue protrusion) in the wound. Treatment can be observation (if it is only a cosmetic issue) or a surgery to repair the weak area of supportive tissue.
- Lymphocele: A lymphocele is a collection of lymphatic fluid (tissue fluid that drains through the lymph nodes) that can rarely accumulate in patients that undergo removal of lymph nodes. Despite careful attention to seal all of the ends, it is possible for some of the fluid to persistently leak from tiny lymphatic channels. These collections can form in the abdomen or pelvis and may compress nerves (causing weakness in the leg) or blood vessels (increasing the risk of a deep vein thrombosis). Typically, the first sign of a pelvic lymphocele is ankle and foot swelling on the side of the lymphocele. Treatment ranges from observation (most often a self-limiting process) to a minimally invasive drainage procedure. The need for an open procedure is uncommon.
- Chronic Pain: While quite unusual, any patient can develop chronic pain in an area that was subject to surgery. The cause is not always forthcoming. While this usually resolves with time, consultation with a pain specialist may be necessary.

Patient

Date

Physician

Date

Witness

Date

The information contained in this Medical Informed Consent Form ("Consent Form") is intended to solely inform and educate and should not be used as a substitute for medical evaluation, advice, diagnosis or treatment by a physician or other healthcare professional. Please call your doctor if you have any questions.