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## MESH REPAIR OF INCISIONAL HERNIAS OF THE ABDOMINAL WALL

This general guide is designed to provide background information to the operation that you will shortly undergo. It aims to supplement verbal discussion, to answer common questions and to be readily available as an *aide memoir*. It cannot cover in detail every aspect of your individual operation and may not deal with some areas that are of particular concern to you. These can be dealt with individually.

You should feel free to ask about any aspect of your care. All your questions will be answered fully, honestly and in as much detail as you wish. In the heat of the moment it is easy for questions that you intended to ask to slip from your mind. You should note on paper any questions that you may have.

Further information is available at the web site above. This site also provides links to other sites that may provide additional information.

### What is involved?

There is now clear evidence that the insertion of a mesh results in a lower recurrence rate. The mesh is placed either immediately over or under the rectus abdominal muscle. These are the vertical strap muscles either side of the midline of the abdomen that men make into a 'six pack'. The incisional hernia that is visible on clinical examination is almost always the 'tip of the iceberg'. At surgery the defect, or defects, are more extensive than clinically apparent. This often requires considerable dissection and a bigger wound than might be expected. Normally a drain will be placed under the skin.

### Pre-operative preparation.

It is important that we know every medical issue that might affect you. What may appear unimportant to you may be essential for us to know. In particular, we need to know all the drugs you are taking and you should bring them to the hospital in their original packet. Unless advised specifically to the contrary you should take all your drugs up to and including the morning of surgery. The exceptions to this are blood thinning agents, such as aspirin, plavix or warfarin, and diabetic drugs. These require special arrangements and must be discussed on an individual basis.

### Pain relief.

Proper pain relief is very important for both holistic and physiological reasons. Your post-operative recovery will be slower if you do not have adequate pain relief. Patients often have an understandable reluctance to take pain relieving drugs. This is a mistake and may increase post-operative complications. The principal that underlies all methods of pain relief is that the drugs work best if you anticipate the pain. A small quantity of the drug taken regularly (even if pain free at that time) will work better than waiting for the pain to occur and then taking a larger dose.

It is possible you will be offered 'Patient Control Analgesia (PCA) for the first 48 hours. With this technique you press a button as and when you feel the pain and a small dose of the pain relieving drug is administered. The advantage of this technique is that a small quantity of the pain relieving drug can be administered in an on-going or regular manner and prevent the pain rather than treating it after it occurs. This is by far the most effective form of pain relief. Alternatively, regular injections can be administered. This is not as effective as they are usually administered after the pain has occurred.

After a couple of days adequate pain relief can normally be achieved by oral medication. Regular panadol, regardless of whether you have pain or not, is the foundation drug. If panadol alone is not adequate, additional, stronger painkillers and/or anti-inflammatory drugs can be taken on top of the panadol for break through pain. You should use panadol for background pain relief for a week after your operation. Many strong painkilling medications contain morphine, codeine or a derivative of these drugs. One of the side effects of these drugs is constipation.

### **The first 24 hours.**

You will be attached to various monitors and numerous observations will be performed. You will normally be permitted fluid and food. The physiotherapist may visit you and will ensure your lungs are clear and free of secretions and exercise your legs.

You will be out of bed, sitting in a chair, having a shower within 24 hours. You will start moving around the ward and generally return to normal, but limited, activities. Your bowels will start to work, but maybe a little erratic. Patients recover at different speeds and you should not be concerned if your progress appears slower than you anticipated. Any drains will normally be removed within 72 hours.

### **Going home.**

You will normally return home three to five days after your surgery, but this will vary according to your progress and home circumstances. You will obviously be tired and you should plan to rest for a short period each day. You should avoid domestic activities for at least the first three weeks. Sitting in a high backed chair can reduce the strain on your abdominal wound as it is easier to get up out of.

Gradually increase the exercise you take. However, you should avoid strenuous exercise for four weeks. 'Little but often' should be your aim and a short walk two or three times a day is better than one long walk. Gradually increase the distance you walk over the next few weeks. It is almost impossible to 'over exercise' yourself to the extent that you damage the surgical area. If you feel comfortable doing a particular activity then it is very unlikely you will do yourself any harm. In general it is sudden, unplanned movements that cause problems.

As you start to feel better the likelihood is that you will overdo it and at this stage a couple of days of feeling well (and overdoing it) will be followed by a bad day as your body compensates. You have been warned! In general you should stop if you feel tired or if you feel pain.

For medico-legal reasons you must not drive for three weeks.

### **Bathing and showering.**

It is quite safe to get your wound wet with a shower or quick bath immediately after your operation. However, long soaking baths with a Jeffery Archer novel should be avoided for at least two weeks as the wound will become soft and the scab may become infected. Adding salt to the bath will not help heal the wound and may make your skin dry and tight. After washing, pat the wound dry with a clean towel. A bath mat helps prevent slipping and a towel hooked around the bath taps can be a helpful lever when you try to get

out. It can also be reassuring to have someone else in the house the first time you have a bath, even if you do not need help.

### **Sleep.**

Changes in your routine, restricted movement, lack of exercise and wound discomfort will interrupt your normal sleep pattern or wake you during the night. Uninterrupted sleep is more valuable than 'cat-napping' so you may find it helpful to take a pain killer before you go to bed. You can resume sexual activity when this feels comfortable.

### **Eating.**

Your appetite will not be good for a week or so after surgery and you may feel aches, bloating and indigestion after meals. These symptoms usually disappear as you become more active. You should take small, frequent meals with a good intake of protein (lean meat, dairy produce, fish *etc.*). A small amount of alcohol can improve your appetite and is not usually harmful.

### **The wound.**

A major concern to patients is that they will strain the wound and that it will rupture. With today's suture materials this is very unlikely. On the very few occasions that a wound does rupture it will be before you leave hospital. This would require an operation to repair the rupture. Once you have gone home a rupture is almost unheard of. If you 'over do it' the worst that will happen is that the wound will be very sore.

Wounds progress through several stages of healing. You may experience:-

- unusual tingling, numbness or itching sensations.
- a slightly hard or 'lumpy' feeling as new tissues form.
- pulling around the stitches or staples as the wound heals.

This is normal. Do not pull at any scabs as they act as a natural dressing and protect the new skin underneath. They will fall off when no longer required. You should seek help if any of the following occur:-

- the wound pain increases
- the wound becomes more reddened or swollen
- there is any discharge from the wound.

### **Work.**

Your return to work depends on many factors, including your occupation, age and general health. You will definitely require three weeks off work, but many will require another two weeks. It is better to feel completely well before you return to work rather than have to take more time off because you have returned to work too early.

At three weeks you will be about 80% back to your pre-operative state. It will take six weeks to be 100% recovered.

### **Surgical trainees**

Some patients may have part of their hernia repaired by a surgical trainee. A trainee repairing this type of hernia is normally, but not always, under the direct supervision of the consultant. It is important that, as part of their training, trainees gain independent experience whilst consultant cover is still immediately available. There is a substantial body of surgical literature that shows the outcome of operations undertaken by properly supervised trainees is no worse than those performed by the consultant. This literature includes hernia surgery.

## What can go wrong?

In surgical terms this is an intermittent operation. Although major complications are a rare event other adverse events are possible, as after any surgical procedure. The following section is a general summary. This list is not exhaustive and if you have any concerns about the possible side-effects or complications you should ask about them before you sign the consent form.

Recurrence is a well recognised problem of hernia repair. The literature suggests an overall recurrence rate of less than 5% if a mesh is used, and in excess of 15% if one is not used.

The aim of the table below is to summarise the overall potential risks and complications of your operation. This is not intended to alarm you as most patients will not have any complications. However, it is important that you appreciate that surgery does carry risks and that complications can and do occur. Although everything possible will be done to prevent the development of any complication, it is only possible to reduce, not eliminate, these events. This list is not exhaustive and if you have any concerns about the possible side-effects or complications you should ask about them before you sign the consent form.

Complications occur in two groups. The first group are a direct and specific effect of surgery. The second group are complications of underlying medical conditions, such as having had a previous heart attack, having a chronic illness such as diabetes, or other risk factors such as smoking.

The best way to manage potential complications is to prevent them occurring in the first place. An essential first step is to correct any underlying medical conditions. For this reason it is essential you advise your doctors of all earlier operations and previous or ongoing medical illness. All your drugs should be brought to the hospital and shown to your doctors. The risk of other complications can be reduced, but not eliminated, by the use of preventative, or prophylactic, treatment.

Risk	What happens	What may be done (options)
<i>General complications that may occur after any surgery</i>		
Clot in legs (DVT)	A clot forms in the legs. This may make the legs swell. The clot may break away into the lungs. This is a pulmonary embolus.	Blood thinning drugs (heparin) started at the time of surgery. TED stockings.
Post-operative bleeding	Blood leaks into the wound or out through a drain. The risk after this operation in <1%.	1. blood transfusion 2. re-operation
Wound infection	An infection, including the development of pus, occurs in the wound. The risk after this operation in <1%.	Antibiotics started at the time of surgery. Drainage of any pus is required, and this may require another operation or drainage under radio-logical guidance
Chest infection	A pneumonia develops	Antibiotics are required. A few patients require ventilation (in ICU)
Wound dehiscence	The wound opens up. The risk after this operation in <1%.	Surgical repair within a few hours.
Hernia around the wound	A weakness develops in the wound. The bowel then slips through the abdominal wall and a bulge appears. This usually occurs more than six months after surgery. The risk after this operation in 5%.	A surgical repair, usually with mesh, is required.
Urinary tract infection	Bacteria enter the bladder	Antibiotics
Bladder may not empty	It is not possible to pass urine. As the bladder gets full, the patient gets	The catheter is re-inserted and removed a few days later. Normally

	uncomfortable.	this solves the problem. Sometimes a catheter is required for 2-3 weeks. In men, prostate surgery may be required.
Vascular event	Stroke Heart attack The risk after this operation is <1% in fit patients. In those with pre-existing vascular disease the risk is greater.	Each event managed on its own merits. Normally a period in ICU is required.
Death	Very rare after this operation.	

<b><i>What increases the risk of surgery</i></b>	<b><i>Examples</i></b>	<b><i>Why is the risk increased</i></b>
Medical illness	Pre-existing general medical conditions such as endocrine disorders, heart attacks or strokes etc.	As far as possible pre-existing medical problems will be corrected prior to surgery
Diabetes		<ol style="list-style-type: none"> <li>1. Ability to combat infection reduced</li> <li>2. Poor blood supply</li> <li>3. Slow healing</li> </ol>
Previous surgery		Scarred tissue is normally of poor quality and does not heal well
Obesity	All risks increased	<ol style="list-style-type: none"> <li>1. poor quality tissue</li> <li>2. poor mobilisation leading to increased risk of DVT, chest infection</li> <li>3. poor blood supply so the risk of wound or anastomotic failure is much increased</li> <li>4. extra strain on the wound, heart etc</li> </ol>
Drugs	Examples include steroids, aspirin, blood thinning agents	Normally because they increase the risk of bleeding, infection or decrease the quality of wound healing
Radiation (previous treatment)		<ol style="list-style-type: none"> <li>1. Ability to combat infection reduced</li> <li>2. Poor blood supply</li> <li>3. Slow healing</li> </ol>
Smoking		Increased risk of infection, vascular events and thrombosis

<b>Definitions</b>		
IVI	Intravenous infusion ('a drip')	
NGT	Nasogastric tube	A fine tube from through the nose into the stomach to drain the stomach and stop vomiting.
ICU	Intensive Care Unit	For very ill patients, or those requiring ventilation
Ventilation		Placing patients on a machine that does the breathing for them. A tube is placed through the mouth into the upper airway. This occurs in an ICU.