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Undergoing pilonidal sinus surgery and perforator-based flap repair

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Introduction

A pilonidal sinus is a pit or pits that are present in the groove between the buttocks (natal cleft); sometimes these pits are connected by a tube-like structure under the skin. The exact cause of these pits is unknown; some may have been present since birth and some may be acquired during life. Hair is thought to be involved, perhaps by piercing the intact skin. The pits may not cause any symptoms, but they are prone to get infected and may develop into an abscess. Symptoms that suggest infection are pain, redness and discharge. Early infection may respond to antibiotics, but if an abscess develops an operation called, "incision and drainage" ("lancing") is usually required to remove the pus. These operations treat the initial infection, but in some people the wounds fail to heal and become persistent with bleeding, discharge and repeated cycles of infection.

Sometimes pilonidal sinuses can recur, after what appeared to be an initially successful operation; this is called recurrent disease.

Unfortunately, persistent and recurrent disease are difficult to treat and sufferers often end up having repeated courses of antibiotics, long-term dressings and multiple, unsuccessful operations, which results in a chronic inflammatory condition, which we call chronic pilonidal sinus disease.

Chronic pilonidal sinus disease is unpleasant and challenging to treat, so surgeons operate soon after a pilonidal sinus is diagnosed to try and avoid the problems of chronic disease. There are many different operations used to treat pilonidal sinuses and pilonidal sinus disease. Unfortunately, there in no agreement on the superiority of one operation over any other for this condition. Some common procedures are:

- Cutting out the affected area and sewing the wound together (primary closure)
- Cutting out the affected area and leaving the wound open to heal with dressings (called healing by secondary-intention)
- Scraping out the sinuses and filling them with a special glue
- Cutting out the affected area and closing the wound by moving in a piece of nearby skin (known as a flap). There are many types of flap, from simple to complex
- Sometimes lasers are used to try and reduce the amount of hair around the sinus or wound

Whatever technique is used, it is important to minimise tension on any wound, flatten the natal cleft and avoid a mid-line scar; these factors can be difficult to achieve with some of the techniques described, so we favour the use of a 'flap' for the repair of wounds after removal of pilonidal sinuses.

Many people with pilonidal sinus disease are treated by their General Practitioner (GP). If surgery is needed for pilonidal sinuses this is usually done by a General or Colorectal Surgeon. However, in individuals with difficult and/or chronic pilonidal sinus disease, we have been using a plastic surgery procedure known as a, "Perforator-based flap" to repair the wounds after cutting the affected area.

The aim of this leaflet is to provide you with information about perforator-based flap surgery for pilonidal sinus disease, to help you understand the procedure and make an informed-choice about treatment.

How is the operation done?

The procedure is carried out under a general anaesthetic, where you will be fully asleep. The operation usually takes two–three hours. You will be an inpatient after the operation, typically for two–three postoperative nights. Occasionally, your stay will be longer if there are any complications after the surgery.

The operation has two stages:

1. Removal of disease

Firstly, the surgeon removes all the diseased tissue (pits, sinuses and granulation tissue), midline scars from previous surgery and a small rim of surrounding normal tissue. Typically, this excision results in a long-oval defect between the buttock cheeks; this wound may go close to the anus.

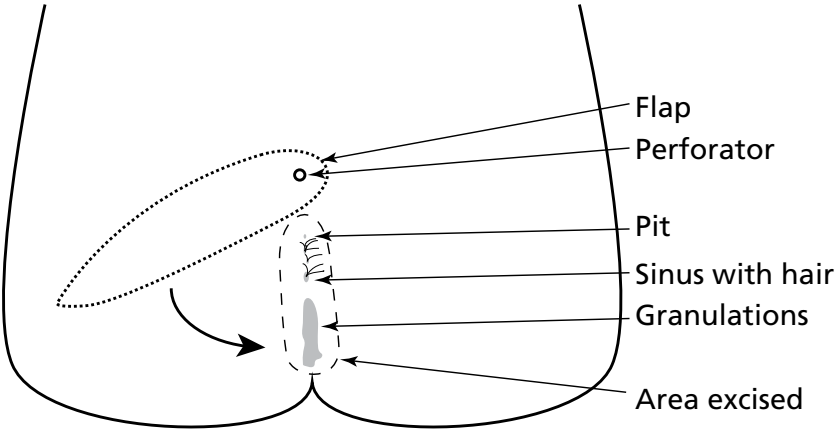
2. The repair

To repair the wound, the Surgeon lifts a piece of skin and its underlying fat off the muscle of the buttock. Near the midline this tissue is kept attached to the body by a small piece of fat containing very small blood vessels, known as, "perforators". This repair technique is therefore known as a "perforator-based flap".

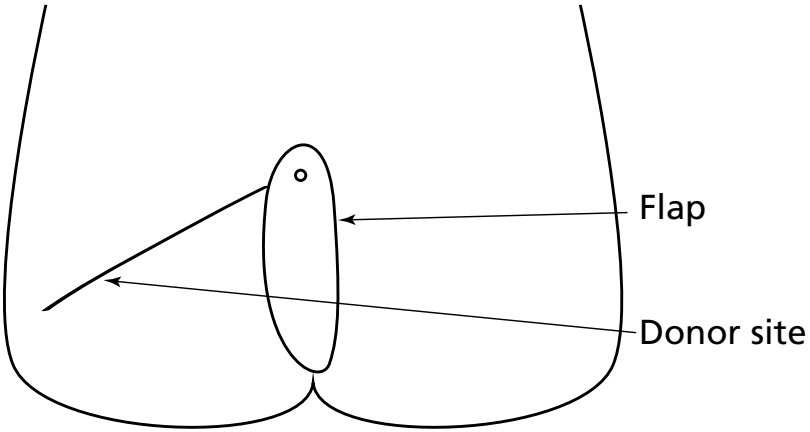
At the end of the operation the wound is dressed with a sticky tape that is glued to your skin. Near your anus the wound will be dressed with an antiseptic ointment. The sticky tape comes away by itself over 10–14

days. All of the stitches dissolve and most are buried under the skin.

The following diagrams illustrate how the procedure is carried out:



Surgical plan for excising pilonidal sinus disease and repair with perforator-based flap



Postoperative result

Outpatient consultation

By the time you receive this leaflet, your surgeon will have seen you in the outpatients' clinic. In this clinic, the surgical team will have listened to your story, recorded your medical history and examined your bottom. During the examination, the surgeon used a Doppler probe to find blood vessels in your skin. These blood vessels are the "perforators" on which the flap for your operation will survive.

After the examination, the doctors will have explained the surgical options that are available to you. Treatment options usually include an operation to remove the diseased area and repair the wound with a flap. However, in some cases, dressings or other types of surgery may be suggested based on your case. The doctors may show you photographs of similar cases to yours to illustrate the procedure and a range of outcomes that are possible.

During your appointment, your surgeon should have explained the side-effects, limitations and risks of the operation. There are some standard risks of this procedure and surgery in general. The doctor will have gone through these with you. These potential problems are described in detail later in this leaflet. If there are side-effects, limitations or risk that apply to you, the surgeon will have discussed these with you too.

There is a lot of information to take in during a consultation. This leaflet will help you to remember and consider what the surgeon has told you. In most cases, the doctor will also supply you with a copy of the letter that they send to the doctor that referred you to the plastic surgery team.

Before the operation

Please keep the buttocks area as clean as possible:

- Shower at least once per day and wash the affected area well
- Remove all dressings prior to showering and apply a clean dressing afterwards
- Change any dressings at least once per day
- After opening your bowels use dry toilet paper followed by moist toilet paper to wipe your bottom. Wipe your bottom away from the wound (back to front)
- There is no need to shave the area or use any hair-removing cream

Hospital admission process

You will receive a letter to confirm the date of your operation and the date of your admission to hospital; this is usually the same day. You may be asked to telephone your consultant's secretary to confirm you can attend for your operation; it is very important that you do this.

If you have any concerns, please contact your consultant's secretary. They will be able to deal with any non-medical issues for you and arrange for the medical team to clarify any questions you might have about the operation.

You will be asked to attend the pre-admission clinic up to one month before your operation; here you may have blood tests and wound swabs taken, and you will be asked questions about your general health. Screening for MRSA is undertaken for all patients at this appointment.

On the day of your operation, you will usually attend the hospital admissions unit where you will be seen by your surgeon and their team, the anaesthetist and members of the nursing staff. The surgeon will recap the operation for you and ask you to sign a form

to document your agreement to the operation. You will get changed into a theatre gown and stay in this area until you go to the operating room. You will be provided with compression stockings to reduce the risk of blood clots in your legs.

After the operation

You will wake up in the operating theatre recovery area and stay here for a short while until the recovery staff are happy that you have woken up fully and safely from your anaesthetic. You will then be taken back to the ward.

On the first night after the operation, the flap will be checked regularly to check its blood circulation is satisfactory. This checking procedure is a tiring time for you, but we need to identify any circulatory problems early so they can be dealt with.

Some discomfort is common after the operation but you will be offered regular pain-killing drugs to help alleviate any pain.

On the night of your operation, you will have an injection of a blood-thinning drug. This injection is to reduce your risk of developing clots in your legs (deep vein thrombosis) or lungs (pulmonary embolism) after surgery. These clots are rare, but significant complications, after this type of surgery.

You will be given antibiotics for up to five days after your operation and an antiseptic ointment to put on the tip of the flap (where it does not have a dressing). The ointment can be continued for two weeks.

For two weeks after the operation will need to lie on your side or tummy, whenever you are in bed; this is to keep pressure off the flap. On the day after your operation you will be able to stand up and walk

short distances. We advise not sitting for two weeks apart from going to the toilet and for journeys to and from the hospital.

Daily showers are advised 48 hours after your operation. The dressings are waterproof and should be patted dry after showering.

Continue to use dry, then moist, toilet paper to wipe your bottom (back to front). You will have a loose-weave gauze between your bottom cheeks; this should be changed whenever it becomes wet, please ask the nursing staff to do this for you, if it is not done routinely. You will be sent home with this gauze, please continue to use it until the surgeon advises you can stop.

Information about the ward

Most patients are cared for on ward 408. This ward is situated off the main corridor on the 4th floor. The telephone number for the ward reception is 0121 371 4080. Ward 408 is a 36 bed ward with 16 side rooms and 5 single sex four-bed bays. Each bed has a television and pay phone facility.

Discharge and follow-up information

You will usually be discharged on the second to third postoperative day. You should be sent home with the following:

- Anti-embolism stockings – to be worn for two weeks after surgery
- Antiseptic ointment to be applied three times daily to the tip of the flap
- Oral antibiotics
- Painkillers
- Loose-weave absorbent gauze dressings

- Follow-up appointment dates with the plastic surgery nurses and your consultant surgeon
- A letter for your GP

Please remember not to sit for two weeks following surgery, except for toileting and travelling to and from the hospital.

Side-effects of the operation

All operations have side-effects, which are unavoidable consequences of your surgery. For this operation these include:

- Long scars as illustrated in the diagram above
- Swelling of flap
- Slight elevation of the buttock on the side where the flap is take from
- Bruising
- Pain and discomfort
- Numbness in the flap and sometimes where it was taken from
- Change in the shape of your natal-cleft (bottom-crack)

Complications of the operation

Complications are undesirable conditions associated with surgery which are not anticipated. We have little control over the risk of developing some complications, e.g. bad scars; others we try strenuously to minimise, e.g. infection.

The following is not an exhaustive list but describes the main complications you should be aware of:

Unsatisfactory scars

There are many type of unsatisfactory scars. The most common type after this operation is the stretched scar, which typically affects

the buttock donor site where the flap is taken from. Scars may be raised, red, lumpy and itchy (hypertrophic or keloid scars). Scars may be tethered, depressed or discoloured. Fortunately, poor scarring is uncommon.

Bleeding

Bleeding after this operation is unusual. Sometimes patients bleed after surgery and develop a blood clot (haematoma) in the wound. Haematoma delay healing and are prone to get infected. Sometimes they are very small and are removed by the body's natural absorption processes; but sometimes they are too large to be left and need to be removed by a further operation. Significant blood clots are usually detected whilst you are in hospital. Occasionally smaller clots are picked up at your outpatient appointments and may also need removing.

Infection

Infection in the wound can cause, pain, redness and swelling and may delay wound healing. Infection will be treated with antibiotics and dressings. Occasionally further surgery may be required.

Deep vein thrombosis and pulmonary embolism

Clots in the deep veins of the body are known as deep vein thrombosis. Occasionally, parts of this clot can break off and move in the blood circulation to the lungs; this a is a pulmonary embolism and is a serious complication of surgery. Fortunately, these complications are rare after this operation. We take lots of precautions to minimise your risk of developing a thrombosis and/or embolism; you will be asked to wear compression stockings; we use special compression leggings whilst you are under anaesthesia; you are given a drug to thin your blood slightly and we encourage early mobilisation.

Flap necrosis

Necrosis is a medical term meaning death of tissue. In this operation part (or rarely all of the flap) can undergo necrosis. Flap necrosis is a major complication and need further operations to deal with. Firstly, any necrotic tissue will need to be removed, then the wound will need to be repaired again; this usually means another flap operation. Whilst necrosis is worrying, it is rare, and in the small number of cases where we have had to do other flaps these have been successful.

Wound dehiscence

Dehiscence occurs when wounds that appear to be healing come apart. Dehiscence is usually minor and can be managed with dressings until the wound heals. Most wound breakdowns occur in the first two weeks following surgery. More serious breakdowns can occur and may require more surgery; this is rare.

Persistent disease

Persistent disease typically follows wound dehiscence/breakdown. In this situation patients never truly heal after the operation. This complication bedevils operations for pilonidal sinus disease. Fortunately, flap surgery lessens this complication to reasonable levels.

Recurrent disease

Recurrent disease is when the disease returns after the wounds have completely healed. This term is often used interchangeably with persistent disease; but they should be viewed as two different situations. True recurrent disease is rare after perforator-based flap surgery for pilonidal sinus disease.

Further information

If you are unsure about anything relating to your operation, please do not hesitate to get in touch with the surgical team looking after you. The surgeons will be happy to meet with you again to discuss matters on more than one occasion if you would like this. To arrange further appointments please contact your consultant's secretary via the hospital switchboard. The hospital telephone number is 0121 371 2000.

The consultant's secretary will also be happy to advise you about non-medical matters relating to your appointments and hospital stay.

Acknowledgements

*UHB would like to thank Mr Garth Titley for kindly producing the illustrations within this booklet.

The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4323.

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