Chapter 2

Pre-operative Care

Screening for fistula (VVF and RVF), 3rd and 4th degree tear patients

Many patients may present at a fistula centre in the hope of free surgery to fix their problem. However, all of them require screening to determine whether they have a fistula, or 3rd or 4th degree perineal tear. The initial screening is often done by the nurse or midwife. Further screening is usually undertaken by the doctors who will operate on the patients, as they need to know the size, site and complexity of the fistula.

Nursing staff are involved in the screening process and are invaluable in assisting the doctors during the history taking and examination process. They can take a short history, examine and document their clinical findings and prioritise who needs to be seen by the attending fistula surgeon. Bloods can be taken at this point, particularly for those patients who are obviously anaemic.

Figure 14 Examination room for screening, privacy using screens

History taking

- Is the patient wet all the time including at night-time? For fistula patients, this needs to be confirmed because those with mild to moderate stress incontinence may describe being wet all day, but usually remain dry overnight.

- Establish whether they became wet following childbirth (vaginal delivery, caesarean section or caesarean hysterectomy).

- Ask whether they are also leaking faeces? This is to establish whether they have an RVF as well as a VVF.

- Patients with 4th degree tears will describe being incontinent of faeces and have faeces in the vagina. They are likely to be unable to control passing stool and/or flatus. In contrast, women with 3rd degree tears may be able to control passing stool at times, but will also frequently suffer from incontinence or soiling.

- Consider the age of the patient – obstructed labour in women in their teenage years tends to be related to the most severe birth injuries, which are often difficult to repair.

- How long has the patient been wet? Urine dermatitis is a sign that the patient has been wet for a long time.

- Obstetric history. Whether this was the first pregnancy, or there have been other deliveries, and, if so, the number of deliveries and number of living children. How did the woman deliver and when? Was it a vaginal delivery or caesarean section? (Fistula after caesarean section may be more complex, related to the ureters or to a ruptured uterus extending into the bladder.)

- How long was the labour? Many patients with fistula will have laboured for more than 24 hours. Is there any footdrop? The longer the obstructed labour lasted, generally the more extensive/complex damage and more severe footdrop.

- Where did the delivery occur? It may have been at home, in a health centre or at hospital. Obstructed deliveries often follow a labour at home with patients not presenting at hospital for caesarean section until it is too late, the baby has died, and a

fistula has formed. Fistula can also develop in a hospital if there is inadequate monitoring during labour (with a partogram), delay in getting to theatre for caesarean, or shortage of staff or an available surgeon.

- Does the woman have a living child from the birth? Almost all vaginal deliveries from obstructed labour will result in stillbirth or early neonatal death due to foetal hypoxia resulting in poor Apgar scores. Women who obstruct during childbirth and fail to deliver may end up with a difficult caesarean section and the formation of a fistula. A few patients may have a live baby if delivered by caesarean. If a live child was delivered by caesarean, the injury may have happened during surgery rather than necrosis from a long obstruction. An intra-cervical or ureteric fistula should be suspected.

- Has the patient had any previous fistula surgery? Subsequent repairs can be difficult to cure.

- What is the patient's social history? Is the patient still living with her husband or partner? Patients who have been wet for a long time may have little family support and may not have an attendant with them who can look after them during their hospital stay. These patients need extra care from the nursing staff. Finding another patient's attendant who is willing to care for them during their stay in hospital can be helpful.

- Menstrual history. It is important to establish whether the woman's menstrual periods have resumed. If a woman's periods have not returned and she has been leaking urine for more than 6 months, a hysterectomy following caesarean should be suspected.

- Sexual history. It should be determined whether the woman has resumed sexual activity and, if so, is she experiencing any problems. If sexually active, check whether or not she is currently pregnant.

- Bladder stones **–** suprapubic pain with urinary incontinence can be indicative of a bladder stone. These are not uncommon among fistula patients, as concentrated urine predisposes to deposits in the bladder that can lead to the formation of bladder stones. Some women may also have had a foreign body, such as leaves, or other matter, introduced into the bladder and/or vagina by themselves or by a

traditional healer to try and block the hole in the bladder. These objects can also lead to the formation of bladder stones causing chronic cystitis.

If a bladder stone is located during surgery, the surgeon will remove it, but it is unlikely that they will attempt to repair the fistula at the same time, as the chances of healing are reduced due to chronic infection in the bladder. The patient will need to return to have the fistula repaired, giving themselves at least 3 months for recovery following the operation to remove the bladder stone.

Examination

- Perform a routine general examination. Record the patient's height and weight. Check for anaemia, jaundice, body temperature, hydration status, mental state and nutritional status. Looking for any evidence of sepsis as patients who have suffered obstructed labour, particularly those with an RVF, will often have endured a difficult recovery post-delivery.

- Nutritional state. For very thin malnourished patients who may also be anaemic, surgery should be postponed until they have attained a healthy weight through measures such as improving their nutrition, taking de-worming medication, treating malaria or other underlying co-morbidities such as tuberculosis. Many women presenting for fistula surgery are underweight and can be operated on provided they have no underlying health problems. Severely malnourished patients are likely to suffer from difficulties during anaesthesia and complications following surgery.

- Examine for contractures and abnormal gait (how they walk). Neurological damage, from nerve compression due to the baby's head being stuck in the pelvis during obstructed labour, can leave the patient with a limp (known as footdrop or dropfoot) or unable to walk unaided. This is a marker for severe injury and often seen with young women presenting with fistula. Footdrop can be bilateral (both feet involved). Contractures of the legs can occur with severe footdrop due to lack of movement of the muscles in the limbs. However, most patients with contractures will improve with time, but need intensive active and passive movement of the limbs.

- Check for evidence of continuous urine leakage such as urine dermatitis, wet clothes, using padding to soak up urine, obvious leaking of urine, presence of stool in the vagina (RVF), vaginal scarring and reduced vaginal capacity (stenosis).

- For patients with 3rd and 4th degree tears examine the vagina, perineum and anal sphincter. Observe for soiling of stool on the patient's pants. Anal sphincter tone needs to be checked by asking the patient to squeeze your gloved finger when inserted in the anus.

Figure 15 Urine dermatitis

Assisting the surgeon in patient evaluation

After the nurse has completed the initial assessment of the patient (as described above), each patient is then examined by the doctor, to assess the fistula to be repaired. Patient privacy is ensured using screens and instructing the patient to keep their clothes on and to pull up their dress or skirt underneath their bottom.

Patients should be provided with a piece of polythene sheet to cover the examination table to prevent infection. The heavy waterproof sheet covering the examination bed should be cleaned with disinfectant between patients. Patients may be examined lying on

their back, on their side with knees to chest or in the lithotomy position.

Figure 16 Examination of a patient on polythene sheet

Nurses need to provide a clean speculum, if possible, a Sims speculum is best, for examination. The speculum must be cleaned in detergent and rinsed with normal saline between each patient. It is helpful to have a bucket of detergent for the dirty speculum, which

Figure 17 Bucket for clean instruments

needs to be soaked for 10 minutes then rinsed. The clean speculums are kept in a clean bucket.

Figure 18 Sims speculum

Figure 19 Bucket for dirty instruments

Water soluble lubricant, such as K-Y jelly, will be needed to reduce the discomfort during vaginal examination. Make sure there is a plentiful supply before screening starts.

Dye tests may be needed to confirm the site of the fistula. Use methylene blue or gentian violet, but ensure it is diluted with saline before using on patients. The dye should be made up daily using sterile equipment. If it is not diluted, it will stain extensive areas, making interpretation of the test difficult; 1–2 ml of blue dye in a kidney dish of saline is sufficient. A Foley or in/out catheter, swabs and a 60 ml or 100 ml syringe will also be needed for the dye tests.

The doctor will specify what is needed to carry out the dye test. The nurse will be asked to pass the doctor the syringe of blue dye and may be required to hold the Foley catheter as the dye is inserted. Between 180 and 300 ml of dye is inserted into the bladder and the vaginal wall is examined for any leakage of dye confirming the site of a fistula.

If the dye test is negative and the patient is insisting that she is wet, further evaluation is needed to rule out a ureteric or pin hole fistula. This involves filling the bladder with blue dye, inserting some gauze or cotton wool in the vagina and getting the patient to walk around for 30–60 minutes. If the gauze or cotton wool is blue when removed, she has a fistula; if it is wet with urine, a ureteric fistula is likely.

Figure 20 Carrying out a dye test using diluted blue dye (note the blue dye on the speculum suggests a VVF)

Counselling before surgery

After the patient has been screened and found to have a fistula the surgeon will inform them whether they can offer a potentially curative operation. The type of operation they require will be discussed and, if any grafts are anticipated for their repair, this should be explained to the patient. They need to understand at this point that they will be required to stay in hospital for two weeks following surgery with a catheter in situ. It is also helpful if they have a family member with them as their attendant to look after them during their stay.

Figure 21 Patient being counselled about possibility of surgery

It is a good idea at this time to tell patients that surgery is not always 100% successful and, if their operation fails, not to worry excessively as they can return for further surgery that may be successful in curing their incontinence.

Patients also need to understand that they will have to abstain from sexual activity for 3 months after surgery or they may become wet again after they have returned home. If it is not possible for them to go home and have their husband abstain from sex, encourage them to stay with a relative until they are well healed.

They also need to know that they will not be able to do any heavy lifting for at least 3 months after surgery. If they are subsistence farmers, they will need someone to help with lifting after they return home.

Future pregnancies should be delayed for at least a year following surgery and contraception should be offered to allow the women to plan for this. They also need to be advised that future pregnancies need to be delivered by caesarean section, otherwise they risk recurrence of the fistula with a vaginal delivery. Elective caesarean is indicated for all VVF, RVF and 4th degree tears following repair.

Immediate pre-operative care

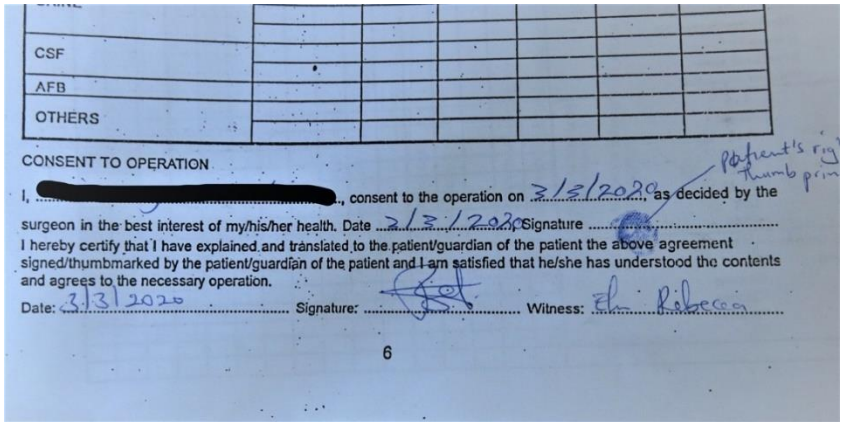
The day before planned surgery, the patients are required to have their bloods taken for haemoglobin (Hb), human immunodeficiency virus (HIV), blood group, blood glucose and a pregnancy test. Some centres test for schistosomiasis, as it can sometimes cause a fistula and is associated with breakdown of repair, but only a few centres include this test. If the patient is known to have HIV, their CD4 count should be checked, especially if newly diagnosed. If the CD4 is less than 300 cells/mm^3, then the operation should be postponed until treatment has started and the CD4 count is up. An intravenous (IV) cannula is inserted at this point for theatre the next day.

It is important to determine a patient's Hb and blood group before surgery in case they have problems with bleeding and may require blood transfusion post-operatively.

Screening for HIV is compulsory pre-operatively. This gives the patient an opportunity to know their HIV status and, if positive, access to counselling and treatment. It will also help protect the surgeon, as extra precautions need to be taken if the patient is HIV positive and not receiving treatment.

Informed consent is required, and the patient should have had pre-operative counselling as to what their surgery entails and what to expect afterwards. Patients who are unable to read and write need to give consent with a thumbprint using ink.

Some surgeons will want all patients to have an enema the day before surgery to ensure the bowel is empty and there is no contamination of faeces during the operation, which can lead to post-operative infection of the wound. However, enemas are required for all rectal tear and RVF repairs, but not all surgeons use bowel preparation for VVF repairs. Warm water and soap enemas are ideal to clean out the bowel.



CSF						
AFB						
OTHERS						

CONSENT TO OPERATION

I, [redacted], consent to the operation on 3/3/2020 as decided by the surgeon in the best interest of my/his/her health. Date 3/3/2020 Signature .....

Patient's right thumb print

I hereby certify that I have explained and translated to the patient/guardian of the patient the above agreement signed/thumbmarked by the patient/guardian of the patient and I am satisfied that he/she has understood the contents and agrees to the necessary operation.

Date: 3/3/2020 Signature: ..... Witness: Eh. Rebecca

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Figure 22 Informed consent using patient's thumbprint

Figure 23 Patient getting a soap enema

All patients need to fast the night before the surgery. This is less important for spinal anaesthesia, but required if the patient needs a general anaesthetic during surgery. No food should be consumed after midnight by patients undergoing surgery the next day, but the patient can continue to drink water until 2 hours before surgery.

In many fistula centres the patients will be given 1 litre of IV fluids 30 minutes to 1 hour before theatre to ensure they are well hydrated. This makes it easier to locate the patient's ureters during surgery to fix the hole in the bladder and hydrates them before the spinal anaesthesia, which can drop their blood pressure.

Patients should continue taking regular medication, i.e. for HIV, hypertension or diabetes, and take their tablets with a small amount of water on the morning of their surgery. Patients who are taking anti-coagulants, like aspirin, need to stop them at least 24 hours before surgery.

Clothing should be removed before coming to theatre and, if available, a theatre gown should be worn or a clean sheet will suffice if gowns are not available. The gowns help keep the patients warm in theatre and allow them to maintain some sense of modesty.

Figure 24 Ladies waiting for surgery. Theatre gowns on, name bands and IV cannula