

11 POSTOPERATIVE NURSING CARE OF THE FISTULA PATIENT

A good operation can be ruined by neglectful aftercare. It is the surgeon's responsibility to ensure that nurses and carers know what is required. In reality, nurses will be in short supply and may be unfamiliar with fistula repair, so postoperative care must be made as simple as possible.

The patient must at all times be:

- draining
- drinking
- dry.

Drainage

Free drainage of urine depends on adequate catheter care. If a catheter blocks, urine may pass alongside it or, *much worse, find a way through the repair*. The scene is then set for failure.

Principles of catheter care

- Nothing must pull on the catheter.
- The catheter must not become blocked or fall out.

The catheter may be secured in the operating theatre with a suture to the mons pubis. This prevents accidental traction on the catheter as the patient is moved from the theatre to the ward and at other times. Strapping to the thigh often comes off, and the catheter may be kinked when the patient turns. Another alternative is to secure the catheter to the abdomen in the midline. Note that there must be slack in the catheter between the urethral orifice and the strapping (Figure 11.1).

Drainage bags or not?

Closed drainage is ideal, but does require vigilant nursing care and good-quality bags (Figure 11.2a). In our experience, the main problem is that the bags may become over-full, especially at night (Figure 11.2b) when nurses are scarce and hampered by frequent power failures. Unless it is certain that staff can look after a drainable bag, we recommend a simple alternative.



Figure 11.1 There must be some slack in the catheter between the urethral orifice and the strapping.



Figure 11.2 (a) This high-quality system is ideal, but is expensive and would rarely be available in an African setting. (b) This bag has already become full, and if further neglected will over-fill and pull loose from the bed, pulling the catheter out of the patient.

The simplest and safest option is *open catheter drainage*. The catheter is connected to plastic tubing and drains directly into a basin under the bed (Figure 11.3). The patient can move freely in the bed, and nothing will pull on her catheter. It is easy to see that urine is draining by watching the drips, and little can go wrong at night. This is a major consideration when looking after up to 60 patients at once, as on some of our workshops.

Infection does not appear to be a problem if urine output is high.

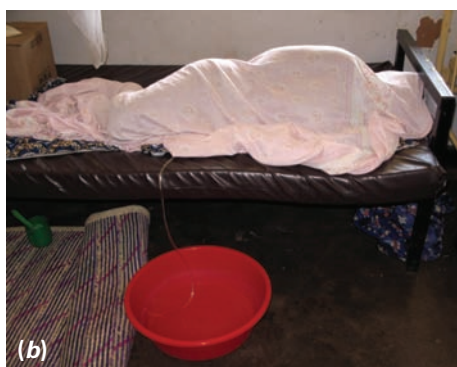


Figure 11.3 (a) Open drainage. (b) Little can go wrong at night.

Blocked catheter

This is an emergency! The symptoms and signs of a blocked catheter are:

- The patient feels a full bladder.
- She is wet (due to leakage round the catheter or through the repair).
- Urine stops dripping into the basin. This would not be noticed for some time when closed drainage is used.

Action must be taken immediately

- **Examine the catheter** (Figure 11.4). In our experience, a twisted or kinked catheter is the most common cause of cessation of drainage. *Constant vigilance is required by patient and staff.*
- **Examine the patient.** Is the bladder palpable? If so, unblock the catheter at once by gentle saline irrigation with a bladder syringe. Only a maximum of 20 cm³ are needed. If the bladder is small, there is a danger of overdoing it. If this does not work, change the catheter (Figure 11.5).
- If there is any doubt about drainage, always irrigate the catheter.

Drinking

A high fluid intake is recommended. This should be started before the operation and continued until after removal of the catheter. This means at least 4–5 litres a day.

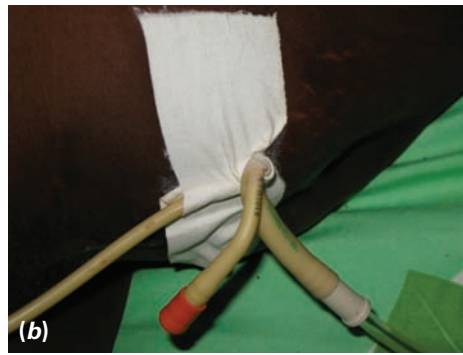
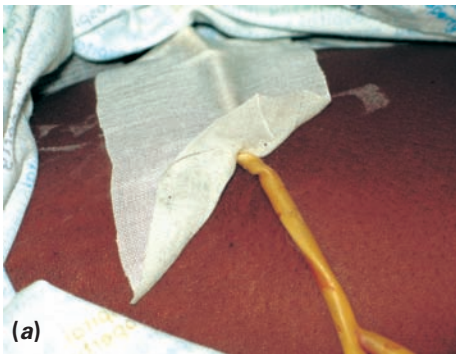


Figure 11.4 (a, b) Twisted catheters. (c) A kinked catheter. Note that the urine is concentrated and contains cloudy deposits. The tubing should be changed and the patient made to drink more.



Figure 11.5 This clot caused a blocked catheter on the first postoperative night. Irrigation fluid would go in, but not come out. The clot was acting as a one-way valve. The problem was easily corrected by changing the catheter.

Many patients may be reluctant to drink. They have been accustomed to drinking little to reduce their wetness. They may be afraid that drinking too much will spoil the repair. They should be reassured that this is not so.

Concentrated urine predisposes to urinary infection and to accumulation of debris, which predisposes to blockage.

Drinking can commence as soon as the patient returns from theatre if she had a spinal anaesthetic, and the intravenous line can be discontinued the same evening. The patient should be kept lying flat for 24 hours to reduce the risk of post-spinal headache (Figure 11.6).

There is no need to record urine output except for the immediate postoperative period. With the open drainage method, it is easy to see at a glance whether the



Figure 11.6 The patient is kept lying flat for 24 hours to reduce the risk of post-spinal headache.



Figure 11.7 The patient must have a plentiful supply of fluids (tea, orange juice or water), and a watch should be kept for urine dripping into the basin.



(a)



(b)



(c)

Figure 11.8 (a) Dirty, concentrated urine. (b) This urine is too concentrated. (c) The urine should be like water.

patient is drinking enough. Look for the drips and look at the colour (Figures 11.7 and 11.8).

A word of warning

Occasionally, a patient will take this advice to excess and drink far too much. This can lead to *water intoxication with hyponatraemia*. This presents as confusion and

coma, even leading to death. If this is ever suspected, the patient should be treated with 0.9% saline (hypertonic if available) and furosemide to promote diuresis.

Dryness

The patient must be dry. There are several possible causes of wetness:

- The catheter is blocked.
- The repair has failed.
- There is urethral leakage.
- A second fistula has been missed.

Blocked catheter

This is serious, but is easily remedied. It should be uncommon if the patient has a high fluid intake.

Failed repair

This should be very unlikely if the surgeon has selected a simple case and repaired it well. If there is any doubt, a dye test should be performed.

Urethral leakage

As well as draining via the catheter, urine will sometimes leak alongside the catheter, and this may suggest that the urethra has poor function. The typical symptom is that the patient feels wet when standing but not on lying. Careful inspection of the urethra while doing bladder irrigation will identify the problem. Unfortunately, not much can be done.

Sometimes, patients may complain of lower-abdominal cramps accompanied by wetness. This suggests bladder spasms producing a leak around the catheter. Reassure the patient, as these always resolve spontaneously. Hyoscine butylbromide (Buscopan) may help if available.

Missed second fistula

A simple low vesico-vaginal fistula may coexist with an intra-cervical or ureteric fistula (both could be iatrogenic at the time of a caesarean section or a hysterectomy for a ruptured uterus). Note that a dye test at the end of the repair should reveal the cervical fistula (unless it is tiny), but would not show a ureteric leak. A ureteric fistula is easily cured by a second operation to implant the affected ureter into the bladder.

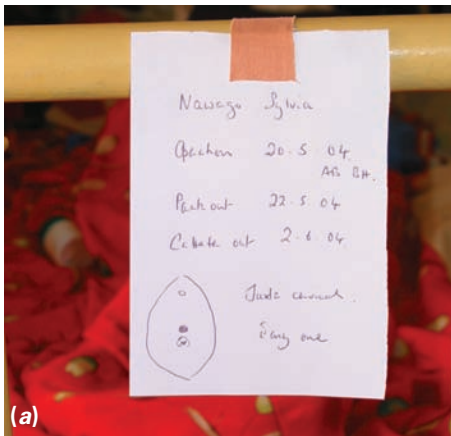


Figure 11.9 A record can be kept at the end of the bed (a) or fixed to the wall (b).

Record keeping

Keep a simple record of the patient’s operation and a postoperative care plan at the foot of the bed or on the wall where it can easily be seen by all (Figure 11.9).

Other aspects of postoperative care

Vaginal packing

Vaginal packing should be removed on day 1 (the day of operation is day 0). There is probably no need to use a pack if the operative field is really dry, but in practice there is often some oozing right to the end of the operation, and most surgeons feel happier to use a pack as a gentle pressure dressing – but it is important to be aware that a vaginal pack can delay the recognition of bleeding deep in the vagina.

Perineal toilet

Twice-daily perineal washing is essential, beginning when the pack is removed on the first postoperative day (Figure 11.10). Particular attention should be given to the catheter as it emerges from the urethra. The patient must perform this washing herself after a few days.



Figure 11.10 Twice-daily perineal care.

Ureteric catheters

Most catheters used to protect the ureters will be removed at the conclusion of the operation. If, however, the repair has been very close to a ureteric orifice or the ureter has been re-implanted into the bladder, the surgeon may require the ureteric catheter to be left in to prevent obstruction to the kidney while healing takes place. It is removed on the surgeon's instructions, usually around the seventh postoperative day, but sometimes after as many as 10 days.

The catheter(s) may be left to drain into a separate bottle (Figure 11.11a), but this hampers early mobility. Two other more convenient methods are illustrated in Figure 11.11(b, c).

Mobilization

The patient is allowed out of bed after removal of the vaginal pack. If she has open drainage, she can use a bucket to collect urine and can carry this around with her (Figure 11.12). This works perfectly well, but it is essential that the patient continues to drink plenty of fluid.

Removal of the catheter

No studies have yet been performed to determine the optimum time for removal of the bladder catheter. From experience, most surgeons leave the catheter in for 14 days after all fistula repairs, but a shorter period may well be sufficient for simple cases. If the catheter is removed earlier, it is essential the patient not be discharged

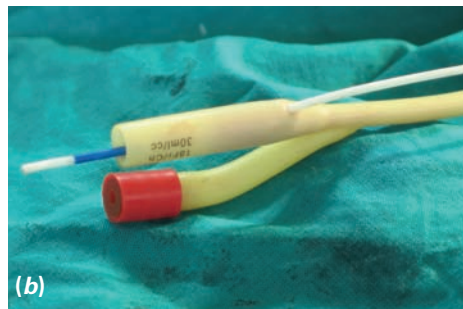


Figure 11.11 (a) Traditional ureteric drainage into a bottle. (b) The ureteric catheter is placed through a tiny stab incision in the bladder catheter so that they both drain down the same tubing. (c) Many drainage bags have a plastic cap on the end. This can be punctured with the point of a towel clip and the ureteric catheter pushed through. It should make a tight fit. This method allows observation of the urine output from each kidney, although this is rarely critical.



Figure 11.12 Patients up and about with their buckets.

for at least a week, because, if a late breakdown occurs, it can be cured by a further period of bladder drainage,

Some people advocate bladder training, by which they mean intermittent clamping and unclamping for 48 hours before the catheter is due to be removed. With low levels of nursing care, this can easily go wrong if instructions are misunderstood, and we are not convinced that there is any benefit in this regime.

Just before the catheter is due to be removed, it is advisable to perform a dye test in a side room or theatre. This enables the surgeon to determine his or her closure rates and also to note any tendency to urethral leakage. If by chance a small leak from the repair is detected, the bladder must be drained for up to another 2 or even 3 weeks. Small late breakdowns will heal.

It is best to remove the catheter early in the morning and to ask the patient to pass urine frequently. The next day, she can try to hold on longer. If outputs are measured (Figure 11.13), voiding volumes of 25–50 cm³ are usual on the first day, but rapidly increase to 100–200 cm³ in most patients.



Figure 11.13 A measuring pot that can fit over the toilet.

It is important to be aware that some patients may make frequent attempts to urinate but void little. They are developing retention.

Problems

The patient is wet all the time after removal of the catheter

In this case, the patient has either a totally incompetent urethra or a failed repair; an uncommon cause is retention with overflow incontinence. A dye test is essential to differentiate the first two, and measuring residual urine will detect the latter. A late breakdown must be managed by more catheter drainage, preferably with rest in bed lying prone. If this does not work, the patient must return in 3 months for another attempt at repair. Total incompetence should be treated by teaching pelvic floor exercises (these should ideally be taught before the operation and continued throughout the postoperative period). The prognosis for recovery is poor. The patient should be asked to return in 6 months for further assessment and consideration of a secondary operation for stress incontinence.

The patient can void, but is wet on standing though dry in bed

This suggests a lesser degree of stress incontinence that may improve spontaneously with the help of pelvic floor exercises. We have seen a number of patients who were discharged wet and yet returned for review completely dry.

The patient is dry, but voids frequent small volumes

This strongly suggests retention with overflow, which probably affects about 5% of patients after catheter removal. It is important to enquire if the patient's bladder feels full; if there is any suspicion of retention then the residual urine volume should be measured. If undetected and untreated, the patient will develop overflow incontinence and be predisposed to chronic urine infections. The condition may resolve spontaneously if the bladder is regularly emptied. In dedicated fistula centres, intermittent self-catheterization can be taught, but an easier and sometimes effective option is to discharge the patient with an indwelling catheter. This can be removed after a month, or longer if necessary. It is essential to maintain a high fluid intake to prevent infection.

Failure of repair

A leak requires a dye test unless gentle irrigation demonstrates leakage around the catheter. A leak from the vagina on dye test indicates a failure, but all is not necessarily lost.

Early leak – in the first week

This is bad news, and usually means that the repair has failed. Early leakage should be rare after easy repairs, but is more of a problem in difficult cases. If more urine is

draining through the catheter than through the vagina, it is worth keeping the catheter in for as long as this is the case, in the small hope that healing might occur.

Late leak – in the second week or later

Occasionally, even simple repairs develop a leak during the second week. This may be a secondary breakdown due to infection. In these cases, as the fistula margins are not under tension and have good blood supply, there is every chance that the defect will close with prolonged bladder drainage. The catheter should be kept in for up to 3–4 weeks in total, as long as the leak is diminishing.

The later the leak, the better the prognosis

It may help to keep the patient in bed, lying and sleeping face-down (Figure 11.14a). In this position, the hole in the base of the bladder will be uppermost and the catheter tip will be below it, i.e. there is sump drainage (Figure 11.14b, c).

Timing of discharge home

Although, in most cases, the catheter is removed on day 14, *we strongly recommend that the patient does not leave the hospital for a least another week.* We have seen several patients who were said to be dry after catheter removal, but have gone home the next day or two and become wet within days. If they had been able to return immediately and have further catheter drainage, they would probably be healed. They were subsequently found to have very localized breakdown that was easily amenable to a second repair.

Is it advisable to let patients who have had major surgery go home over long distances in crowded taxis, on the back of a bike or by a long walk? It is not surprising that some secondary breakdowns occur. The other advantage of retaining the patient for a week or longer is that one can often see early stress incontinence improving over a matter of days. Also, those with incomplete emptying or urine infections requiring treatment may also be recognized.

All patients must be told to return at once if they become wet after going home, and they should be given money to enable them to do so. They should also be advised to avoid strenuous activity for several months.

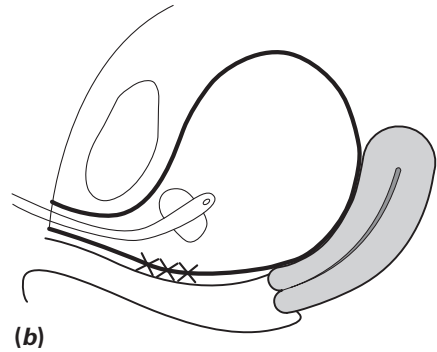
The patient should be given a card describing her treatment and giving the operation date to aid later identification and to advise caesarean section should she present pregnant to another hospital.

A cautionary tale

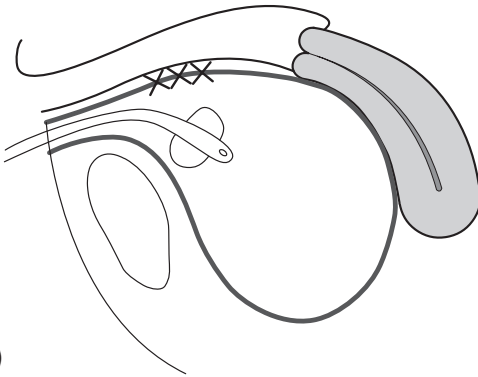
A patient set off on a 200-mile journey home 3 days after removal of a catheter. She claimed to be voiding well. She had a 5-hour ride in a crowded taxi, which did not



(a)



(b)



(c)

Figure 11.14 (a) The patient should be nursed in a prone position if she has a secondary breakdown. (b) With the patient on her back, the area of breakdown is in the dependent part of the bladder. (c) If the patient lies prone, the defect becomes highest and urine will drain preferentially through the catheter, giving the defect a better chance to heal.

stop on its way. She felt a full bladder, but was too embarrassed to ask the taxi driver to stop. She became wet and, hoping that it was a temporary problem, continued home. Finding herself wet all the time, she was too far to return immediately, and anyway had no money. She later returned. A small, high, very difficult intra-cervical fistula was repaired successfully. If only this patient could have delayed setting off home or returned immediately for further catheter drainage, this situation could have been prevented.

Pre-discharge advice

Counselling

Before discharge, the patient and her family must receive advice so that they understand why the fistula occurred and how it can be prevented in future. Many patients come with traditional beliefs about the cause of the fistula – for example, that it was a punishment for adultery or that someone has cast a spell. These and other false ideas must be gently corrected. Once home, she must become an advocate in her community for prevention.

Abstinence from sexual relationships for at least 3 months

Occasionally, we see patients who went home dry but report a leak developing after a few weeks. Perhaps they were forced into sex.

Caesarean section for all future pregnancies

It is essential to discuss family planning issues, including tubal ligation where relevant. The surest way to maintain a cure is to have no more deliveries! Future pregnancies must be delivered by caesarean section. If the obstructed labour was due to a malpresentation, the patient could possibly deliver vaginally in future, but, as skilled obstetric care is rarely available, it is best to insist on a caesarean section for all subsequent deliveries. From time to time, we do see patients with recurrence of fistulae because they have not been able to get to hospital in time, or because they were given a trial of labour instead of an elective caesarean section.

Return for follow-up consultation

It is so important for surgeons to know their results that patients should be given every encouragement to return. One surgeon forbids resumption of sex until the patient has been seen for follow-up. He gets a high return!

Possible late problems**Urinary infections**

With our regime of a single dose of gentamicin 160 mg in theatre and a high urine flow, infected urine is uncommon. A late postoperative infection could be caused by a stricture with retention or even a missed bladder stone. Where limited laboratory facilities exist, inspection of the urine should be enough to make the diagnosis.

Stress incontinence

This frequent and troublesome problem is discussed in Chapter 9.

Stricture

Any patient who had a stricture of the proximal urethra at the time of repair is at risk of postoperative stenosis. Any urinary symptoms require examination of the urethra with dilators. Small Hegar dilators are ideal for this. Small strictures should yield readily to dilatation. Regular dilatation will prevent the stricture from becoming resistant. The patient should be taught to do this herself with a catheter.

Sexual difficulties

In spite of a good repair without any vaginal stenosis, some women are reluctant to resume sexual relations. There may be a number of reasons for this, and sensitive enquiry and examination are required to reassure her. Others with genuine dyspareunia due to vaginal stenosis may be helped by a vaginotomy, especially if the narrowing is localized.

Re-integration

Much has been written about counselling and helping to re-integrate fistula patients into the community. Many patients are very poor and certainly appreciate financial help; however, in practice, if the patient is dry, she will re-integrate and, if she is wet, she may not.

As already mentioned, those patients who are cured must be educated about the cause of their fistula and understand how fistulae should be prevented. They can then become educators for their own community.