

5 DIAGNOSIS

All of the photographs in Chapter 4 were taken in theatre before operation. This chapter deals with how one can recognize the type of fistula by history taking and examination. (Note that the data shown in *italics* in this chapter are taken from an analysis of over 500 consecutive fistula patients examined by the author in Uganda.)

History taking

The following details are required:

Symptoms It should be confirmed that the patient is wet all the time. If she is dry at night then she probably has not got a fistula. Ask if there is any leakage of faeces as well as urine. (*In Uganda, 6% of patients who delivered vaginally had a recto-vaginal as well as a vesico-vaginal fistula, but this combination was rarely seen if the patients had a Caesarean section. The incidence of recto-vaginal fistula in Ethiopia is much higher at around 15%; the reason for this difference is not known.*)

Age (*The mean age given was 26 years.*)

Parity (*50% were primiparous.*) If the patient is multiparous then which delivery caused the fistula? (*In 90%, it was the last pregnancy, but some women do become pregnant even with a fistula.*)

How long has the patient been wet? (*The mean duration of fistulae was 6 years range (1 month–36 years.)*)

Mode of delivery Was childbirth by vaginal delivery or Caesarean? (*66% of fistula patients were delivered by Caesarean. The figure may be quite different in other countries. For instance, in Ethiopia, the figure is around 10%; in contrast to Uganda, most patients live in such remote areas that they have no chance of reaching a hospital at all.*)

Does the patient still menstruate? Amenorrhoea is not uncommon after such a traumatic childbirth, but if the patient had a Caesarean section then one should suspect a hysterectomy for a ruptured uterus. Some patients do not know that they have lost their uterus.

Did the child survive? (*In women developing a fistula after Caesarean section, 12% had a live baby. Only 4% of those delivering vaginally had a live baby.*)

Where did the delivery take place: home, maternity centre or hospital? (*About two-thirds of those delivering vaginally did so at home.*)

Have any attempts been made to repair the fistula? (*13% of patients presenting to the author with a fistula have had a previous unsuccessful attempt at repair. Patients sometimes hide this information for fear that they will be turned away.*)

Social history The majority of patients with a long-standing fistula are single and live a very restricted life. The longer they have had the fistula, the more likely they are to be alone.

Summary

History taking does not help that much in selecting the easy cases – a small hole leaks just as much as a big one. There are, however, some clues that should arouse suspicion of a bad injury:

- Neurological weakness (usually foot drop), even if it has recovered.
- Rectal fistulae (*6% after vaginal delivery, 1.6% after lower-segment Caesarean section in Uganda*) usually occur in association with a bad bladder injury. This does not apply to anal sphincter injuries, which often occur in isolation.
- Fistulae following a Caesarean section are often in the region of the cervix (due to a combination of ischaemia and operative trauma), but are sometimes just simple low vaginal fistulae.
- A fistula following hysterectomy for a ruptured uterus will usually be in the vault or be due to an accidental ureteric injury.

Examination

Inspection

1. Look for obvious urinary leak and urine dermatitis (Figure 19). (The dermatitis is caused by concentrated urine – ask the patient to drink more if it is not possible to operate immediately.)
2. Can the urethral orifice be seen? In very bad fistulae, it can be completely destroyed. (*2% in Uganda.*)
3. Is there any stenosis? (Figure 20).



Figure 19 Urine dermatitis.



Figure 20 Severe vaginal stenosis seen on inspection.

Palpation by PV

Using the index finger gently:

1. Can any stenosis be felt? Smaller degrees are felt as a band of fibrous tissue around the lateral and posterior circumference at any depth in the vagina. In extreme cases, the whole of the vagina is stenosed.
2. Can a defect be felt in the anterior vaginal wall? This will range from a large defect where the finger immediately enters the bladder, to smaller defects that just admit the finger, to the smallest ones where no defect is felt at all. (With experience, one gets better at detecting the small ones.)
 - If a defect can be felt, where is it in relation to the urethra and the cervix?
 - If a fistula can be felt, consider the margins carefully. Are they soft and supple, a bit rigid or (in the worst cases) stuck to the pubic rami?
3. Can the cervix be identified? Does it feel normal? How deep is the vagina, has it been shortened?

The anterior cervix is often torn in fistula patients. Defects in this region are often difficult to feel unless they are large. When there has been a lot of tissue loss, the anterior vaginal wall is shortened and the cervix (or remnant) will be easily felt. If a small defect is felt that is not too close to the cervix and has soft margins with no vaginal stenosis then this is a suitable case for the beginner.

If preferred, the fistula can be inspected. This is best done with the patient in the lithotomy position, using a Sims speculum.

What should be done if the patient says she is wet but it is not possible to see any wetness or feel a fistula?

In this situation, the patient should be asked to drink plenty and then be re-examined (remember that many patients drink very little, especially if they know they are going to be examined). If it is thus confirmed that the patient is wet but a fistula cannot be felt then one should proceed as follows. If a Sims speculum is available, it should be used to expose the anterior vaginal wall. The patient should be asked to cough – a small fistula may be readily visible. The alternative is to perform a dye test as shown in Figure 21.

Ureteric fistulae

A ureter can be damaged accidentally during a Caesarean section, but injury is more likely during an emergency hysterectomy for a ruptured uterus. After the operation, urine leaks into the pelvis and some days later finds a way out through the lower segment incision or between the sutures in the vaginal vault.

To exclude a ureteric fistula, empty the bladder and insert a dry swab in the vagina. Ask the patient to drink and walk about. Re-examine after half an hour. If the swab

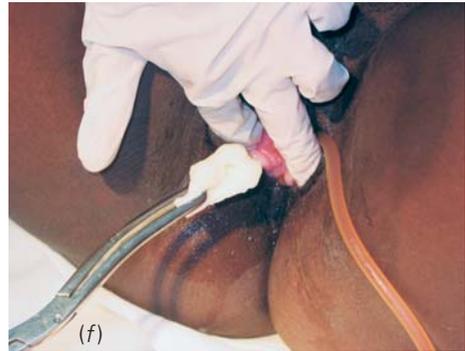


Figure 21 (a,b) Insert a catheter to perform a dye test. Dilute methylene blue (or gentian violet) is used. If it is too concentrated, it stains everything, resulting in difficulty in interpreting the test. Fill the balloon of the catheter and have two or three moist swabs ready to put in the vagina. (c,d) Put the swabs well into the vagina. (e) Slowly instil about 50 ml of dye. (f,g) Remove the swabs one by one. If the first is not stained but the second is stained blue, this confirms the presence of a fistula. If neither of the swabs is stained, there could still be a fistula, and the test should be repeated using up to 200 ml of dye. Wait for 20 minutes with the dye in the bladder. Sometimes the hole is very small, especially if it is between the cervix and the bladder. If this second test is negative, there may be an uretero-vaginal fistula.

is wet then a ureteric fistula is present. Although uncommon, it is very important to recognize because it can easily be cured by an abdominal operation (see Chapter 10).

(21 ureteric fistulae were encountered in 520 wet patients in Uganda. In 9, the ureter had been injured at a Caesarean section, while in 12, the injury occurred during hysterectomy for a ruptured uterus. In 3 patients, there was a ureteric fistula coexisting with a simple vaginal fistula. These were not recognized until after the vesico-vaginal fistula had been repaired! They were easily cured by a second operation to implant the ureter into the bladder.)

Postpartum stress

This is occasionally troublesome and can be mistaken for a fistula. Take the catheter out, leaving the dye inside. Watch to see if it dribbles out of the urethra and then ask the patient to cough. If there is significant stress, dye will come out. The management is conservative with pelvic floor exercises. Another uncommon cause is the postpartum atonic bladder leading to overflow incontinence. This will settle after a period of continuous catheter drainage.

Rectal fistulae

Finally, do not forget to examine the posterior vaginal wall and anal sphincters. A rectal fistula with a simple fistula is highly unlikely, but an anal sphincter tear is not infrequent. If the patient is symptomatic, consider repair (see Chapter 11).

Selecting the easy cases by history taking and examination should now be possible

There is no need to perform an examination under anaesthesia in order to select cases. By all means examine the patient in the theatre in the lithotomy position with a good light and speculum without anaesthesia. If the fistula cannot be exposed without anaesthesia then it is not an easy case. Assuming that the fistula can easily be seen, it should be possible to go ahead and give the anaesthetic and do the operation. However, if a beginner has any doubts, they should not proceed – instead, wait for a really easy case.

Investigations

Haemoglobin above 10 g/100 ml is preferable, but a lower level can be accepted, as blood loss will be minimal for simple fistulae.

- Intravenous pyelography and ultrasound scan are not necessary, even for bad fistulae.