

12 ASSESSMENT OF RESULTS

Any surgeon wants to know his or her results, but accurate documentation is beset with a number of difficulties:

- **Inoperable cases.** Specialists vary in their estimates of the percentage that they see as inoperable from the start, ranging from less than 1% to around 5%. Even experienced surgeons can occasionally start a case and find it impossible to finish. Clearly, if these are not included in an analysis then comparison between centres or individuals is not valid.
- **Area of work.** Anyone starting fistula repairs in a new location will have the benefit of virgin territory, with a good proportion of easier cases. As visits or work continue, the percentage of easy cases drops dramatically as re-repairs and cases of stress incontinence dominate the picture. Also, as surgeons become established in their localities, they will be referred more and more difficult cases as surgeons whom they have trained do the easy cases. So the results for the same surgeon may change with time.
- **Incomplete follow-up.** It is ideal practice to perform a dye test before removing a catheter to assess closure rate. If this is not done for all patients, a dye test can be performed just on those who are wet after catheter removal in order to distinguish between breakdown and stress. Some late breakdowns occur after the patient has gone home and some cases of stress cure themselves, so a follow-up appointment is really necessary to be sure of the outcome. However, this is often difficult in an African setting.

Recording results

A key step for any surgeon, whatever his or her experience, is to record results for all new cases and re-repairs separately, and at the same time to diligently record those that are not done because of difficulty or impossibility or that are referred on elsewhere.

We record details of our patients on Excel databases. A balance has to be struck between, on the one hand, collecting every scrap of data just because it might be of future interest and, on the other, missing data that will be useful for prospective analysis. In setting questions, it is important to have 'yes' or 'no' answers or numerical data as in the Goh and Waaldijk classifications. The use of purely descriptive terms for each patient's fistula will not help in the analysis of results. However, there must be a place for describing the operation or other unusual features, as each patient and her fistula are unique.

In assessing results, there are many variables, and one must be clear about definitions:

- **Complete cure.** To be completely cured, the patient must be totally continent and be able to bear children. The only study on fertility after fistula repairs comes from Nigeria, where it was found that only 25% became pregnant again. Reproductive capacity is reduced, the leading causes being amenorrhoea, vaginal stenosis and cervical incompetence.
- **Acceptable cure.** This is to be dry
- **Failure.** This is a breakdown of the repair confirmed by dye test or stress incontinence so bad that the patient feels no improvement on the preoperative state.
- **Stress incontinence.** This occurs in varying degrees and has to be quantified descriptively – and objective assessment is not easy in an African setting. See Chapter 9.

Surgeons working in permanent fistula centres can be much more objective about their results, as they are there to see the early postoperative results themselves, or at least have them accurately assessed by experienced staff.

Throughout Africa, many fistulae are repaired by regular visiting surgeons. They will often have moved on by the time the patient is discharged, and therefore have to rely on later reports from remaining staff, who may for various reasons omit a dye test. This situation obtains to my practice in Uganda and West Africa. A practical method of documentation in this situation is as follows:

- **Cured.** The patient has been seen at least 3 months after her operation and is completely continent.
- **Presumed cured.** The patient was said by the staff to be dry on discharge and has not returned for follow-up.
- **Failure:**
 - The patient became wet in the postoperative period, and breakdown was confirmed by a dye test.
 - The patient was wet on discharge, although it was not known if this was a breakdown or due to stress. A few of the latter cases may improve and not return for follow-up. In our practice, we suspect that the majority who are seriously wet do return. We are then able to decide if they have stress or a broken repair.
- **Stress.** The patient has a negative dye test, but is clearly wet. Further follow-up is needed to decide if this rates as:
 - *Total stress.* The patient feels that she is no better, and she does not void any urine.
 - *Partial stress.* The patient is dry at night on sitting, but becomes wet on walking or standing and does void urine spontaneously.

There will still be a few results that do not comfortably fit into these categories, for example those patients who have strictures requiring dilatation or those with some chronic retention.

We have emphasized that every effort should be made to follow up patients after repair. In addition to enquiry about continence, one should record any changes in menstrual function, sexual function and social integration.

Comparison of results from a part-time versus a full-time fistula surgeon

Given the uncertainties of incomplete follow-up, my best estimate of results as a regular visiting surgeon in 790 consecutive previously untreated cases in Uganda are as follows:

- The fistula is too extensive for any attempt at repair in 2.4% or is irreparable at operation in 1% of cases.
- In 90% of those operated upon, the fistula is closed at the first attempt.
- Of these, there is total stress incontinence in 10% and partial in another 10%.

That is, approximately 70% of new patients go home dry after the first operation.

Andrew Browning's results as a full-time fistula surgeon in Bahr Dar, northern Ethiopia, are considerably better. In 400 new cases, a closure rate of 97.5% was obtained with an 18% urethral incontinence rate at the first operation, i.e. approximately 80% of new patents go home dry after their first operation. About 2% of cases are too bad for any operation.

It is inevitable that a full-time fistula surgeon working in a good environment with a stable team will get better results than an itinerant part-time surgeon such as myself. This is born out by the results recently published by Tom Raassen of his series of 581 previously untreated obstetric fistulae.¹ The setting was the African Medical and Research Foundation (AMREF) Flying Doctor Fistula Project, encompassing 22 different hospitals across Kenya, Tanzania and Uganda. Although the surgeon conducting the repair often departed soon after surgery, the patients were left in the hands of well-trained assistants.

All the patients had a dye test at 14 days, which revealed a successful closure rate of 90.7%; with a further 4-week period of catheter drainage, the closure rate increased to 93.8%. Thus, the dye test had revealed a few unsuspected breakdowns that subsequently healed with further catheter drainage. The stress rate detected at dye test was 8.4%. The symptomatic stress rate may be higher than this.

Another very significant observation was that 16% of patients in the series had had their fistula repaired within 3 months of injury. They did just as well as those who came later for repair.

Mortality rates

Fistula repair is major surgery, and it is not surprising that there will be cases of morbidity and mortality. Mortality of the order of 1 in 500 may be expected. The majority of these deaths will be due to unrelated medical problems. Causes specific to the surgery include anaesthetic mishaps, possible water intoxication and pulmonary embolism. Occasionally, deaths occur for which no clear explanation can be given.

I have so far lost one case from an overwhelming chest infection, and Andrew Browning has also lost one patient from suspected cerebral malaria.

Reference

1. Raassen TJ, Verdaasdonk EGG, Vierhout ME. Prospective results after first time surgery for obstetric fistulas in East African women. *Int Urogynecol J Pelvic Floor Dysfunct* 2008; **19**: 73–9.