

Vesico-vaginal and recto-vaginal fistulae

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Keywords: vesico-vaginal fistula; recto-vaginal fistula; aetiology; surgery; spontaneous cure

Summary

A personal series of 716 patients with vesico-vaginal and/or recto-vaginal fistulae is presented. Five hundred and seventy-eight patients were managed in Africa, mainly at the Addis Ababa Fistula Hospital, while 138 were kindly referred to me from various parts of Britain. The main cause of such fistulae in the developing world is pressure necrosis from obstructed labour. In the developed world the aetiology is surgery, malignancy, radiotherapy or a combination of these. Other causes include neglected foreign bodies, coital injury and local treatment by an unqualified practitioner. A vesico-vaginal fistula alone was present in 78.8%, a recto-vaginal fistula alone in 4.3%, while 16.9% of patients had both a vesico-vaginal and a recto-vaginal fistula. Six hundred and six (84.6%) patients were cured at the first attempt at repair, 45 (6.3%) failed and 65 (9.1%) had stress incontinence.

Introduction

Fistulae of obstetric origin are common in sub-Saharan Africa. A high prevalence has been reported from Nigeria¹, Chad², Sudan³ as well as Ethiopia⁴. In Kano, Northern Nigeria, there are about 1000 patients awaiting treatment at any one time. The Addis Ababa Fistula Hospital, a simple, efficient, 40 bed ward, with an operating theatre (three tables) and hostel accommodation was opened in 1975. Prior to that time, fistula patients were treated in part of a general hospital. Each year for the last 22 years I have acted as locum while doctors Reginald and Catherine Hamlin, who run the hospital go on leave. Five hundred new patients are seen each year.

Patients and methods

Seven hundred and sixteen patients treated for vesico-vaginal and/or recto-vaginal fistulae by the author were analysed. One hundred and nineteen (16.6%) patients had had previous attempts at repair elsewhere, the number of attempts ranging from one to six. The type of fistula and the main causes are given in Tables 1 and 2, respectively. Other causes include neglected foreign body (7, all in Britain), and coital injury (12), incision by unqualified practitioner (4), and lymphogranuloma venereum (1) (all in Africa). The combined fistulae were all of obstetric origin in Africa.

Table 1. Type of fistula

Vesico-vaginal fistula	564 (78.8%)
Vesico-vaginal and recto-vaginal fistulae	121 (16.9%)
Recto-vaginal fistula	31 (4.3%)

Table 2. Aetiology of fistulae

	Africa	Britain	Total
Obstetric	559	7	566
Surgery	2	99	101
Malignancy	0	25	25
Other	17	7	24

Of the 31 recto-vaginal fistulae alone, 28 were managed in Africa, 12 were coital injuries in nulliparous young women, the injury in seven being a third degree perineal tear and in five being a recto-vaginal fistula situated in the lower part of the middle third of the vagina; 15 of the recto-vaginal fistulae in Africa were obstetric in origin and one was due to lymphogranuloma venereum. The three recto-vaginal fistulae in Britain were of obstetric origin and were third degree perineal tears.

The mean age of the patients was 22.1 years (range 9-45 years) in Africa, and 41.5 years (range 16-68 years) in Britain.

The labour at which the fistula occurred was the first in 364 of the 566 patients with obstetric fistulae (64.3%). The mean length of labour (given by the patient) in Africa was 3.7 days (range 1-7 days).

The fistula was classified as complicated when one or more of the following was present: much scarring; total destruction of the urethra; ureteric orifices at the edge or outside the fistula; small bladder; the presence of a vesico-vaginal and recto-vaginal fistula; or the presence of calculi.

Four hundred and forty nine (62.7%) were complicated, the number in Africa being 407 (70.4%) and in Britain 42 (30.4%).

In addition to the 716 patients, there were 17 patients whose fistulae healed spontaneously: three recto-vaginal fistulae, two of whom were associated with endometriosis and 14 vesico-vaginal fistulae. Four of the vesico-vaginal fistulae which healed spontaneously were in Britain, three of these followed caesarean section for failure to progress in labour and healed after 3, 4 and 5 weeks respectively with an indwelling catheter. One vesico-vaginal fistula which followed surgery healed at 6 weeks - this patient would not tolerate an indwelling catheter for longer than 4 weeks following the discovery of the fistula.

Management

The interval from causative injury or previous attempt at repair to actual repair was 2-3 months; in patients who had radiotherapy this interval was at least one year. A primary vaginal approach was

Paper read to joint meeting of Sections of Obstetrics & Gynaecology and Urology, 21 March 1991

Table 3. Results

Cured	606	(84.6%)
Stress incontinence	65	(9.1%)
Failed	45	(6.3%)

used for the repair in 706 patients and a primary abdominal approach in 10 patients. Operative details of the vaginal approach have been described previously^{5,6}. The basic points are adequate exposure which may necessitate an episiotomy and division of scar tissue and mobilization so that the fistula can be repaired without tension.

Where the urethra has been destroyed, urethral reconstruction is required. This was performed on 77 patients or 11.2% of the 685 vesico-vaginal fistulae in this series.

Ureteric catheterization is useful where the ureteric orifices are close to, or outside the margin of the fistula - 282 patients (41.2%) in this series. Because the ureter was outside the margin of the fistula reimplantation into the bladder was required in 40 patients (5.8%).

A Martius⁷ pedicle graft was used to support the repaired fistula in 504 patients (73.6%), while the gracilis muscle⁸ was used in 28 (4.1%).

Results

These are shown in Table 3. Cured means cured at the first attempt at repair.

Discussion

In this study more complicated fistulae and more combined vesico-vaginal and recto-vaginal fistulae were seen in patients managed in Africa. Fistulae of surgical origin were more common in Britain as was spontaneous cure - 4.3% compared with 1.7% in Africa.

Prevention of fistulae is the ideal and that means more midwives and maternity clinics, ready availability of referral to centres dealing with problems in labour, and community education involving all health care professionals including traditional birth attendants⁹. In countries with mountainous terrain and few roads, better communications are required and the provision of a maternity waiting home where patients can reside in close proximity to a hospital has been shown to reduce maternal mortality and morbidity¹⁰. Obstetric fistula is one such common morbidity and occurs mainly in young women in their first labour. The longer the labour the more severe the injury to the genital tract and the more complicated the fistula. Traditional beliefs, poor nutrition or excessive ritual circumcision may play a contributory role in the aetiology.

Fistulae seen in developed countries will be less easy to prevent, eg, those caused by malignancy.

Many surgical fistulae occur after relatively straightforward procedures and presumably follow undetected small abscess formation.

Prevention of fistulae in developing countries will take time. Meanwhile provision of effective therapy for the sufferers of such fistulae must be provided. Doctors Reginald and Catherine Hamlin in Ethiopia and Doctor Ann Ward in Nigeria who provide the largest fistula repair services in the world would support the idea of separate, small, efficient units providing open access for patients rather than operating in part of a large general hospital. Of course, local situations will influence such a decision. Good pre- and postoperative nursing care is essential.

When discussing who should do fistula repairs, the answer is someone who is interested in the fistula patient whether that is a urologist, a gynaecologist or even a 'trained helper'. Part of the care at the Addis Ababa Fistula Hospital is provided by former fistula patients who have been trained to carry out duties normally performed by specialist doctors in a developed society. A former patient, now an assistant, was recognized in the honour bestowed on the Hamlins by the Royal College of Surgeons of England in recognition of the contribution of such trained helpers to the surgical work¹¹ of the Addis Ababa Fistula Hospital.

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(Accepted 12 June 1991)