

## Case report

# Complex obstetric fistulae – two case reports

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## Abstract

Two cases of complex obstetric fistulae are reported. Poor assessment and mismanagement of labour were revealed. ~~The resulting fistula was vesico-urethra-recto-vaginal and vesico-cervico-vaginal.~~ Plastic repair using a modified Martius graft was used in case 1. Considering the young age of the patient, transplantation of the ureters into the rectum or colon was deemed undesirable. The patient's endurance over a period of ten years, with seventeen attempts at repair ultimately was rewarded by achieving both vesical and rectal continence. Repair using the transvaginal route was successful at the first attempt in case 2.

## Introduction

Even today, labour in a primigravida may result in complications quite unacceptable to live a normal life. Urogenital obstetric fistulae, often the result of poor assessment and mismanagement, are expected to be rare in developing and developed countries, where basic facilities are available for a safe outcome. Two cases of complex obstetric fistulae managed with favourable results are reported.

## Case 1

A 23-year old woman had continuous passage of both urine and faeces through the vagina since the delivery of her first baby, stillborn 6 months before admission. She had laboured for over 18 hours in her local hospital, and was eventually transferred undelivered to a teaching hospital 50 miles away. Fetal demise ensued. A mid-cavity forceps was performed to extract the dead fetus. The still-born infant weighed 3570 g. Involuntary escape of urine and faeces through the vagina was the final outcome. The vaginal walls were in shreds, the urethra almost completely avulsed, the anal sphincter and anterior rectal wall ruptured. A repair of the anal sphincter and anterior rectal wall attempted immediately, broke down. Dribbling urine and involuntary escape of faeces from the vagina continued. Six months later she was seen in our unit. She was short,

emaciated and walked with a limp. The left lower limb was more wasted than the right and weak. Other systems were normal. The vulva showed a scarred excoriated perineum and a ruptured anal sphincter. Escape of urine was continuous. Digital examination showed a space with shreds of vaginal wall, and posteriorly, the sacrum. The anterior rectal wall was found missing for about 4 cm from the ruptured and scarred anal sphincter. The cervix was felt and had a left-sided tear. The body of the uterus was normal.

Examination under anaesthesia was performed. Apart from the findings already noted, the cervix was found tethered to the vaginal wall on the left side. Vaginal wall was scanty beneath the ischio-pubic ramus. The vestibular area on either side of the damaged urethra was found preserved to some extent. There was no urethra, except a small area beneath the urethrovesical junction. To the left of the junction was an opening about 5 cm in diameter through which urine trickled. The opening appeared to have extended to the urethral sphincter on the left side. The anterior rectal wall was absent for about 5 cm from the ruptured and scarred remains of the anal sphincter on either side.

Repair of the anterior rectal wall and the anal sphincter was attempted first, to establish rectal continence. The scarred areas of the anal sphincter on either side were identified and the sphincter was repaired with catgut. The anterior wall was repaired by fashioning a modified Martius graft of fibro-fatty tissue from the right labium majus. The post-operative period was managed with a constipating diet, oral neomycin and small doses of liquid paraffin. The repair was successful at the first attempt.

The reconstruction of the urethra was attempted 4 weeks later. Tags of urethral mucosa were seen at the site of the original urethral meatus. The urethra was absent except for parts of its anterior mucosal wall. The lowest damaged end of the urethra showed pouting mucosa through which urine trickled. This was the site of the urethro-vesical junction, which was found to be partially

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damaged. The damage from the upper end to the junction measured 4.5 cm. A polyethylene tube 0.5 cm in diameter was introduced through the opening into the bladder. The tube was supported by a silk ligature applied just beneath the glans clitoris. The available anterior urethral wall was then separated from the vaginal wall. The dissection was extended up to the urethro-vesical junction. Four sutures were applied at this site bringing the bladder tissues and paraurethral tissues together with catgut. An incision was made on the left mons pubis and labium majus and a thick fibro-fatty pedicle was fashioned and its upper end was brought into the vagina. The pedicle was sutured, filling the empty space and supporting the reconstructed urethra.

The incision on the left labium majus was repaired. The polyethylene tube was strapped to the left thigh and connected to a urine bag for drainage. The upper part of the constructed urethra had broken down when examined 3 weeks later. Reconstruction of this part of the urethra was attempted 5 months later. The repair failed. More attempts were made at suitable intervals. Finally, on the ninth attempt, the deficiency at the urethro-vesical junction was corrected.

The repair of the large vesico-vaginal fistula was attempted 6 months later. The technique of saucerisation was employed. A total of 7 attempts were made. Each time the procedure failed, but the fistula was found to be smaller. The final and seventh attempt was successful. From the time the patient came under our care a total of 17 attempts at repair were made.

The patient was admitted one year later with an incomplete abortion at 10 weeks gestation. At curettage an infra-vaginal cervical tear was found, with a tear extending to the left side. The tear was repaired. The bladder capacity was considerably reduced. The IVU was normal. The patient failed to keep her out-patient appointments and was finally lost to follow up.

## **Case 2**

A 39-year old woman complained of leaking urine through the vagina since the birth of her last child 2 months before admission.

Her first two pregnancies were normal. The third pregnancy was a lower segment caesarean section. A trial of scar was given for the fourth pregnancy. The labour was prolonged and vaginal delivery of a live fetus ensued. Leakage of urine commenced immediately after.

Physical examination was normal. At pelvic examination the urethra was found to be normal. The anterior bladder wall was ruptured with pouting bladder mucosa at the edges. The anterior lip of the cervix was missing, and the cervical canal was exposed. Urine steadily trickled from

the vagina. A metal catheter passed through the urethral orifice was seen to appear through the ruptured bladder wall and vagina. A vesico-cervico-vaginal fistula was diagnosed. All routine investigations and IVU were normal.

Examination under anaesthesia was performed. The findings were confirmed. A uterine sound passed through the apex of the ruptured cervix was found to enter the body of the uterus. The distance from the posterior lip of the cervix to the apex of the rupture was 3 cm. The deficiency in the anterior bladder wall extended from about 1.5 cm from the urethral orifice downwards and laterally on either side to the level of the torn anterior lip of the cervix.

The vesical component of the fistula was repaired using the conventional technique of mobilisation of tissue planes and final approximation of the bladder wall and vaginal wall separately. The cervical canal was reconstructed from the internal os downwards. The edges of the damaged anterior lip were approximated. Continuous bladder drainage was employed for a period of 3 weeks. Post-operative period was uneventful. Bladder and urethral function were completely restored.

## **Discussion**

Complex fistulae are often the result of obstetric mismanagement. Fistulae with bladder and urethral damage, and sometimes damage to the rectum and anal sphincter are the result. Reduced bladder capacity often ensues when repair is delayed.

Giant vesico-vaginal fistulae sometimes involve the bladder neck. In such instances repair becomes difficult and establishment of vesico-urethral competence is unsatisfactory. The problems encountered in the repair of complex fistulae are enormous. Dense fibrosis, poor blood supply, paucity of normal tissue, difficulties of apposition without tension, bridging areas with loss of tissue and viable support at the site of injury are some of the problems that have to be addressed.

The conventional technique involving mobilisation of vaginal wall from the bladder wall is the method most gynaecologists prefer in a primary repair approached transvaginally (1). With every repeated operation more fibrous tissue is formed, leading ultimately to a poor blood supply (2,3). We did not consider transplantation of ureters into the rectum or colon as an appropriate method, considering the young age of the patient in Case 1. We used a modified Martius graft as an adjunct in the repair of the urethra and the recto-vaginal fistula (4). Through a fibro-fatty pedicle, the vascular supply is adequate. The profusion of fibrous septa is, in addition, a source of strength, unlike adipose tissue found elsewhere (5). The graft provides support for large fistulae, and recurrent fistulae. Neovascularisation in the presence of dense adhesions and scanty normal tissue provides the catalyst for a successful and rewarding repair (4,5).



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Necessarily the large vesico-vaginal fistula in Case 1 had to be repaired in stages, each time repairing a smaller deficiency. The anterior rectal wall and anal sphincter were successfully repaired at the first attempt. This in a large measure helped to prevent infection in areas of repair. The ultimate post-operative result in Case 1 was most rewarding. The reduced bladder capacity improved with time. The vagina was considerably shortened. After restoration of vesical and rectal incontinence the patient proved her fertility, though unsuccessfully, due to poor cervical competence. The patient's countenance, endurance and determination in subjecting herself to 17 operations under general anaesthesia finally paid off.

What needs emphasis is patience, on the part of the patient as well as the surgeon, if success is to be achieved for this most distressing obstetrical catastrophe.

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## Execution of innocents?

The statistics are telling. Since 1973, 87 prisoners have been released from death row after new evidence suggested they were innocent. That amounts to one release for every seven executions. And late acquittals are increasing. Between 1973 and 1993, an average of 2.5 death-row inmates a year were found to be innocent. In the six years after that, the rate nearly doubled to 4.6. In just the first three months of 2000, three inmates were exonerated and released. If so many can be reprieved, how many innocents might, over the years, have been sent to undeserved deaths?

In January, Governor George Ryan of Illinois lost patience with this. Condemning his own state's "Shameful record of convicting innocent people", he announced a moratorium on executions until the state was able to get its house in order. It is a messy house: Illinois has exonerated 13 death-row inmates since 1976, one more than it has actually executed.

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