Peer review

Case study: Pregnancy outcome following vesicovaginal fistula and severe vaginal stenosis – a complicated presentation

Summary

Vesicovaginal fistula (VVF) is physically, socially and psychologically devastating to the women who suffer from it. This case report describes the pregnancy outcome in a woman with vaginal stenosis, who had undergone repair of a recurrent VVF. The patient went into premature labour with breech presentation and underwent emergency caesarean section because of previous hysterotomy and VVF repair due to obstructed labour. Unfortunately, the premature baby died in the neonatal intensive care unit (NICU) a month after delivery.

Keywords: Obstetric labour complications, vesicovaginal fistula

Introduction

Vesicovaginal fistula (VVF) is a direct pathological communication between the urinary bladder and vagina, resulting in involuntary leakage of urine into the vagina from the bladder. It is one of the most common distressing conditions that bring women to hospital, especially in developing countries ¹. It is a condition with tremendous socio-economic and health implications and consequences ². Other related problems, which make it even more distressing, are childlessness from loss of viable foetus in pregnancy associated with VVF, secondary infertility, vaginal stenosis by fibrosis and bands, amenorrhoea, failed surgical repair and elective caesarean section in those who get pregnant later ³.

Case report

In June 2009, a 25-year-old woman attended the labour room in our hospital. She was 28–30 weeks pregnant and reported pain in the lower abdomen for one day.

Her past history showed a VVF occurred after the delivery of a term still birth following two days of obstructed labour at home in January 2005. Her past surgical history included hysterotomy in January 2006, due to excessive bleeding per vaginum at 20 weeks gestation. She had undergone hysterotomy, as vaginal evacuation of uterus was not possible because of vaginal stenosis that followed VVF. She attended the urology out-patient department (OPD) in July 2007 for the first time with the
complaint of incontinence of urine and stool. She was found to have both VVF and recto-vaginal fistula (RVF). Sub-trigonal VVF 2cm in diameter was then repaired vaginally, but RVF could not be repaired since the patient could not withstand the prolonged surgery and increased blood loss. The patient was readmitted to the urology ward with RVF and failed VVF repair in July 2008. After cystoscopy, VVF and RVF were repaired with Gracilis muscle flap. She was then discharged after her urinary and faecal incontinence resolved.

When we examined her in the labour room, her vital signs were stable and she was in labour. Per abnormally, her uterus was 28 weeks size with breech presentation and painful uterine contractions were present. Foetal heart rate was found to be 142 beats per minute, regular and clear. Digital vaginal examination revealed vaginal stenosis. Per speculum examination showed bulging of the bag of membrane through 1.5cm diameter orifice of the stenosed vagina about 3cm above the level of introitus. She had no feature of RVF or VVF. Her routine blood investigation reports were within normal limits, but urine examination showed features suggestive of urinary tract infection. Emergency caesarean section was decided in view of obstructed labour. A female 1.2kg pre-term baby was delivered and cared for in the neonatal intensive care unit (NICU). The baby died in NICU one month after delivery due to septicaemia. The woman has received follow-up care in our OPD and has been counselled and prescribed contraception.

**Discussion**

Obstructed labour remains the most important cause of VVF in developing countries\(^3\). Prolonged impaction of presenting part against a distended oedematous urinary bladder eventually leads to pressure necrosis and fistula formation. Fistula may be caused by trauma with forceps and other instruments used for delivery of stillborn infants and surgical abortion\(^4\). VVF is most commonly repaired transvaginally by gynaecologists and the transabdominal route is adopted mostly by urologists, particularly in cases where the fistula is higher up in the vault of the vagina or the size of fistula is too large to be repaired transvaginally. Scarring from previous surgery and severe vaginal stenosis also makes it difficult to repair the fistula transvaginally\(^4\). In general, up to 80% fistulae are repaired transvaginally\(^3\). Our patient had associated vaginal stenosis, so VVF could be repaired successfully only in the second attempt.

A number of studies have shown that following repair, as few as 19% achieve pregnancy with perhaps a higher rate of prematurity and infant mortality\(^5-8\). It is commonly recommended that any further delivery post-repair should be by caesarean section\(^6\).

**Conclusion**

Obstetric urogenital fistula is a preventable condition. If functional capacity of our health infrastructure is improved, this will help to prevent misery of obstetric fistula and its sequelae also in future pregnancy. A failed attempt to repair a VVF yields one of the most demoralised patients. So every effort should be made to increase the success rate of repair in the first attempt. Successful repair, together with an aggressive drive to improve antenatal care in these patients, will improve the acceptance of the policy of elective caesarean section and overall pregnancy outcome.

**References**