

APPENDICO-VESICOSTOMY IN THE MANAGEMENT OF COMPLEX VESICO-VAGINAL FISTULAE.

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ABSTRACT

Complex vesico-vaginal fistulae (VVF) continue to complicate prolonged obstructed labour in this country. Recently a young lady presented to us with a huge VVF, associated with loss of the urethra and bladder neck, severe gynaetresia and recto-vaginal fistula. Her VVF was successfully managed by an appendico-vesicostomy.

Key words: Complex vesico-vaginal fistula, appendico-vesicostomy

INTRODUCTION

Genitourinary fistulae have troubled man since ancient times. Archaeological studies identified fistulae in well-preserved mummified members of the royal Egyptian court¹. Fistulae cause misery and substantial life disruption for the patient and can be associated with medico-legal consequences for the caring physicians.

In developing countries, birth trauma still accounts for the majority of fistulae². Prolonged labor induces tissue necrosis of the bladder base and urethra, which results in tissue loss that can be substantial. This leads to the development of large vesico-vaginal communication often attended by the sloughing off of the urethra and bladder neck. Concomitant severe gynaetresia compounds the problem. Such complex fistulae continue to pose great challenges to the surgeon and surgical repairs are attended with dismal result.

Recently we managed a woman with a complex VVF with an appendico-vesicostomy using the mitrofanof principle and report our experience here.

Case Report

A 20-year old lady presented to the University of Benin Teaching Hospital with a 5-year history of leakage of urine and faeces per vaginam. She had an obstructed labour that lasted for three days. A traditional birth attendant managed her labour. She eventually had a spontaneous vertex delivery of a macerated stillbirth. Subsequently, she developed peroneal nerve palsy and was unable to walk for six months. She was abandoned by her husband and could not pay for her medical treatment. A chivalrous person volunteered to finance her treatment and brought her to the hospital.

On examination she had a short stature (1.47m) and weighed 43kg. She stank of urine and stool. The vagina could barely admit one finger. An abdominal

ultrasound scan revealed a right hydronephrosis and normal left kidney. An intravenous urogram (IVU) showed a poorly functioning hydronephrotic right kidney and a communication between the bladder and the vagina. An isotope renal scan was not done because such facility was not available in our hospital. A temporary defunctional colostomy was done and fistula repair per abdomen was decided upon.

At operation it was noted that the entire bladder neck and urethra had sloughed off leaving a wide communication with the vagina. This area was surrounded by bony hard indurations. The left ureteric orifice was identified at the edge of the cavity but the right orifice was not visualized. The right ureter was obstructed low down in the pelvis by dense fibrosis. The bladder base was carefully dissected off the fibrous tissues and the bladder was closed to form a pouch. The appendix was mobilized and implanted into the bladder using the Mitrofanof technique³. A right uretero-neocystostomy was also done. She had a smooth post-operative recovery but the right kidney remains poorly functioning. She empties her bladder by catheterizing the appendix conduit.

Her colostomy has since been closed but she still leaks stool per vaginam occasionally. She has been followed for 14 months now and remains happy with her condition. Her major concern at the moment is sexual function and fertility.

DISCUSSION

Complex vesico-vaginal fistulae include giant VVFs larger than 3cm in diameter, fistulae associated with severe gynaetresia or those complicated by recto-vaginal fistulae with consequent faecal soiling of the vagina. Such fistulae associated with destruction of the trigone, bladder neck and urethra as was in this patient. They result from prolonged obstructed labour, a situation that has continued to

bedevil obstetric practice in many developing countries.

Many techniques have been described to repair these challenging anatomical distortions and defects. Martius fibrofatty labial interposition tissues, anterior/posterior bladder flaps (autografts), myocutaneous flaps including rectus, satorius, gluteus, and gracilis muscle flaps, as well as combined myocutaneous flaps^{4,5} have been used as adjuncts to the repair of these complex fistulae.

None of these methods lent itself to the management of this patient mainly because her gynaetresia was so tight that only a finger could be inserted into the introitus. The tissues around the vagina were bony hard. We imagined that relaxing incisions would not improve access to the vagina. Under these circumstances, we chose to turn the bladder into a low-pressure urinary reservoir by carefully isolating and closing the bladder neck. Thereafter, an appendico-vesicostomy was constructed as a continent catheterisable portal for draining the bladder, using the Mitrofanoff flap valve principle.

The procedure is not without complications. The most common complication reported in the literature was stomal stenosis which occurred in 10-20% of patients. Such stenosis tend to occur early and might require formal revision⁶. Incontinence occurs in less than 5% of cases. Indeed incontinence is a rare event with the Mitrofanoff principle; it may result from inadequate length of the flap valve mechanism or persistently elevated reservoir pressure. Another problem that has been mentioned is perforation of the appendix. Our patient has no complications from this procedure during a follow-up period of one and half years. This is in keeping with low complication rates by Mitrofanoff³ and others⁶ and suggests that an appendix could provide a durable conduit.

From our experience in the management of this patient, we suggest that an appendico-vesicostomy is a viable option in the reconstruction of complex vesico-vaginal fistulae..

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