

## URETHRAL INCONTINENCE IN POST REPAIR GENITOURINARY OBSTETRIC FISTULA

### Hypothesis / aims of study

This study was undertaken 1) to review urethral incontinence cases following successful repair of genitourinary fistula 2) to evaluate the main predictors of urethral incontinence & 3) to analyse the effectiveness of urethral sling operations.

### Study design, materials and methods

This is an institutional, retrospective clinical analysis. A retrospective record review was conducted of all women with genitourinary fistula who were operated in the study place between January 2004 to December 2007. Data were collected from data collection sheet which was used to collect information's from all fistula patients admitted in the hospital from admission to discharge. Informed consent was taken from every patient. The patient who developed urethral incontinence following successful closure of fistula were included in this study. The records of the patients who were readmitted for treatment of urethral incontinence and had subsequent surgeries (urethral sling) were also analysed. Prolin mesh which is usually used for abdominoplasty was refashioned and used as a sling. Autologous rectus sheath was also used for sling procedure.

### Results

A total of 673 patients were operated during the study period and records of 532 cases were available. The causal factor was of obstetrical origin in 83.33% of cases. Permission for review of records taken from institutional head. Of the 532 patients, successful closure was obtained in 419 (82.48%) cases. Among them eighty patients (19.09%) developed post repair urethral incontinence which were including in this present study. Eleven patients procedure had urethral sling. Of the urethral incontinent patients 76 (95%) were primipara with no living child, mean age was 14.3 years at the time of concurrent delivery, duration of labour was approximately 2.32 days. Nineteen

(23.75%) patients was delivered by caesarian section, 8 (10%) by craniotomy, 2 (2.5%), by forceps, 2 (2.5%) by ventouse, 2 had subtotal hysterectomy for ruptured uterus and 47 (58.75 %) delivered spontaneously. All delivery occurred following obstructed labour. The type of fistula were neck fistula in 26 (32.5%), urethro vaginal in 12 (15%), circumferential in 7 (8.75%), juxtra cervical in 3 (3.75%) and absence of urethral in 5 (6.25%) and vesico cervical in

2 (2.5%). In 25 (31.25%) cases the fistula was at the base. Urethral involvement was presents in 35 (43.75%) of cases, size of fistula was small (upto 2 cm) in 27 (33.75%), medium (>2 – 4cm) in 30 (37.5%), and big (>4-6cm) in

23 (28.75%). Significant scarring was observed in 38 (47.5%), vaginal stenosis in 14 (17.5%), blocked urethra in 7 (8.75%), RVF in 11 (13.75%) of cases and history of previous surgery was present in 33 (41.25%) of cases.

Regarding management of the study patients, during fistula repair transvaginal route was choosen in 73 (91.25%) and abdomino perineal in 7 (8.75%) cases, spinal anaesthesia were used in all of the cases and when the surgery was prolonged then the spinal anaesthesia was needed to converted to converted to general anaesthesia. Duration of surgery was within 3 hour in 64 (80%), 3-6 hours in 10 (12.5%) and more than 6 hours in 6 (7.5%) cases. In addition to repair of fistula, vaginoplasty was done in 14 (17.5%) urethroplasty in 28 (35%), Kelly's suture in 3 (3.75%), repair of RVF in 11 (13.75%), labial fat graft used in 32 (40%) and omental graft in 2 (2.5%) cases. For the management of urethral incontinence pelvic floor exercise was advised and anticholinergic drug were prescribed. All were advised to come for follow-up but only records of 11 cases were available who were readmitted for persistent incontinence. Urethral sling was done in 11 (13.75%) cases and among them prolin mesh was used in 9 (81.8%) cases and autologous rectus sheath in 2 (18.18%) cases. Those 11 cases were followed-up for 6 months. Continence was observed after sling in 7 (63.6%) cases, mesh erosion occurred in two (18.18%) cases. In mesh eroson cases after removal of prolin mesh and reconstruction of urethra, subsequently, continence was secured. Both rectus sheath sling were failed.

### Interpretation of results

Neck fistula, urethrovaginal fistula, circumferential fistula, where urethra is involved are at high risk of having post repair stress incontinence. Associated vaginal stenosis, scarring, and RVF are additional risk factors. This incontinence may be due to intrinsic sphincter damage. Careful planning and additional procedure like urethral buttressing or tubularization of bladder wall could improve the result. Retrospective analysis limits accurate due to some missing information or difficulty in interpretation of data collected by different people it different time.

### Concluding message

There is a gap between successful closure & cure. Repair of fistula with partial or complete involvement of urethra is a challenge for fistula surgeons. The more serious the damage the less encouraging is the result. Better understanding of pathophysiology of continence may help in improving the result. Prospective analysis / research and shearing of experiences of fistula surgeons are needed, which will help to improve the technique and restoring the function of lower urinary tract. Palliative devices are not available / affordable to women of developing world who are the main victim of obstetric fistula. Analysis of every patient before surgery, during surgery and afterwards may help in refining the technique.

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<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>Ethical Review Committee, Dhaka Medical College Hospital</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>