

## A CASE OF TRANSURETHRAL INVERSION OF THE BLADDER

by

M. Y. RAVAL,\* M.D., D.G.O.

and

S. NANAVATI,\*\* M.D.

Spontaneous partial inversion of the bladder has been reported mainly in young girls by Campbell (1937), Potter (1952) and Flocks and Culp (1967). St. George reported complete transurethral inversion of the bladder in 1970.

### CASE REPORT

A woman aged 60 years was admitted to the B. Y. L. Nair Charitable Hospital on 28th May 1973 because of something coming out per vaginam, incontinence of urine and difficulty in walking for the last three months. Her menopause had been 15 years earlier. She had a spontaneous complete abortion of 5 months gestation many years ago.

General examination revealed marked anaemia and debility. The blood pressure was 150/90 mm Hg. Examination of the respiratory system revealed signs suggestive of pulmonary tuberculosis. There was a third degree prolapse of the uterus, with a red, fleshy mass at the vulva anterior to the cervix. It was oedematous, haemorrhagic with white flaky areas and with a greenish discharge on its surface. The mass was covering the entire urethral opening. There was marked leakage of urine per vaginam. There were multiple unhealthy ulcers on the vulva (fig. 1). The uterus was retroverted and retroflexed and normal in size. The fornices were clear but there was rectovaginal fistula.

\*Assistant Professor of Obstetrics and Gynaecology.

\*\*Honorary Professor of Obstetrics and Gynaecology.

Department of Obstetrics and Gynaecology, Topiwala National Medical College and B.Y.L. Nair Charitable Hospital, Dr. A. L. Nair Road, Byculla, Bombay-400 008, INDIA.

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Even on close questioning the patient did not give a history of incontinence of stool.

A tentative diagnosis of carcinoma of the vagina was made. The routine investigations were (i) Haemoglobin 7.5 gm%, (ii) E.S.R. 30 mm for the first hour, (iii) VDRL test negative, (iv) the blood urea 103 mgm%, (v) X-ray examination of the chest revealed tubercular infiltration of the right apex, (vi) sputum examination did not show acid fast bacilli, (vii) urine culture revealed growth of E. Coli—sensitive to streptomycin, mandalamine and furadantin, (viii) serum electrolyte levels and serum creatinine level were normal and (ix) Electrocardiogram showed ST-T changes. Biopsies were taken from four different areas from the edges of the mass. The biopsy report was chronic granulomatous inflammatory tissue without any evidence of malignancy.

The patient was put in 30 degree Trendelenberg position. The prolapsed mass was covered with cold compresses soaked in a solution of magnesium sulphate. After about a week the prolapsed mass reduced and the urethral opening became visible. The urethra admitted two fingers. It was through this wide urethra the bladder had prolapsed. A diagnosis of transurethral partial inversion of the bladder with third degree uterovaginal prolapse and rectovaginal fistula was then made. Three days later the prolapse recurred and it could not be replaced. Cystoscopic and cystographic examinations were attempted but could not be done due to patulous urethral opening with poor sphincteric tone.

The patient was given antianaemic and anti-tubercular treatment and was pronounced fit for surgery after about three and a half months. She was taken up for operation under spinal anaesthesia. Mayo-Ward's vaginal hysterectomy with repair was done. In addition Kennedy Kelly's repair was done for stress incontinence



and to narrow the entire urethra. Finally the rectovaginal fistula was repaired in the usual manner. Unfortunately, although the partial inversion of the bladder was corrected completely and the rectovaginal fistula healed by first intension, the incontinence of urine persisted. Three weeks later a small vesicovaginal fistula was detected. As we felt that due to extensive fibrosis, there was not sufficient tissue for successful repair of vesicovaginal fistula, a bilateral ureterosigmoidostomy was undertaken as a palliative measure. She developed pulmonary embolism on the fourth postoperative day and expired.

#### Discussion

Four types of inversion of the bladder have been described (Klauser, 1922). (1) Inversion of the bladder mucosa only, (2) partial inversion of all the layers of the bladder wall, (3) total inversion of the entire bladder and (4) inversion of a diverticulum of the bladder.

Prolapse of the bladder mucosa only is rare (Espinosa *et al*, 1958; Bernardo and Roth, 1963). Treatment is excision vaginally or by a suprapubic approach.

Partial inversion of all the layers of the bladder which is common in infant girls can be corrected by transurethral reposition and recurrence prevented by fixation of the bladder suprapubically to the anterior abdominal wall-urethrocystopexy.

Total inversion of the bladder wall is the rarest of all the types and has been reported to occur more commonly through the orifice of a large vesicovaginal fistula (Mahfouz, 1938; Moir, 1961; Lawson, 1967). This type of inversion was noticed in labour (Mahfouz, 1938; Heyns, 1941; Sutherland *et al*, 1964) and (b) spontaneously in female infants and in a non-pregnant adolescent (Pasley, 1929). Transurethral spontaneous inversion of the bladder occurs more commonly during labour when there is a tear of

the urethral sphincter. On the other hand, tears of the urethral sphincter may occur during forceful reposition of the prolapsed bladder. This inversion of the bladder is easily explained by the fact that in labour a lax and toneless wall of the bladder may prolapse through a relaxed internal urethral orifice due to either severe straining or trauma. Inversion of a diverticulum of the bladder is often encountered by urologist and treatment is surgical excision.

In the present case partial spontaneous transurethral inversion of the bladder wall can be attributed to extreme laxity of the internal urethral sphincter and chronic cough due to tuberculosis. Super-added factors may be postmenopausal relaxation of the congenitally weak internal urethral sphincter and malnutrition.

Thompson-Walker (1950) has rightly said that as no author has sufficient number of cases for standardization of treatment, every case has to be treated on its own merits. St. George (1970) suggested that attempts should be made to reduce the inversion by the usual transurethral route, failing this a suprapubic approach with the fixation of the bladder to the symphysis pubis, anterior abdominal wall or uterus could be attempted. Sphincteric reconstruction may be required in cases of a torn or relaxed sphincter.

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See Fig. on Art Paper IX