Transperitoneal Repair of Vesicovaginal Fistula Secondary to Bladder Stone

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Obstetric trauma is responsible for over 90% cases of vesico-vaginal fistula in India, whereas in the developed world, the majority of urinary tract fistulae occur following gynecological surgery, particularly hysterectomies and caesarean section. Here is a case of vesico-vaginal fistula caused by a big bladder stone. The patient had earlier successful repair of the vesico-vaginal fistula that had developed after hysterectomy following obstructed labour and ruptured uterus.

Bladder stone with pointed end towards vagina.

Mrs. S.D., 45 year old married lady (para 5+0) presented on 4/12/96 with the complaints of dribbling of urine per vaginum for last 2½ years. She had laparotomy at Patna Medical College & Hospital 9 years ago for rupture of uterus following obstructed labour. Hysterectomy was done along with extraction of a still born fetus. She had urinary incontinence during post-operative period due to formation of a VVF. The fistula was repaired vaginally 6 months later. She was continent for about six years and then developed dribbling of urine per vaginum. Clinical examination revealed mild anaemia. There was no abnormality in the cardiovascular and respiratory system. Per abdomen a hard suprapubic lump (bladder stone) equivalent to 14 weeks size gravid uterus was palpated. Vaginal examination revealed a large vesico-vaginal fistula at the vault with impacted stone. The calculus was easily seen on speculum examination.

Investigations :

Pre-operative investigation results showed WBC 8400/ cumm, Hb% 9.00 gm/dl. Urine analysis - albumin present (Heavy trace), Urine culture-profuse growth of Kleibsella, Blood Urea - 25 mg.dl, Creatinine - 1 mg/dl.

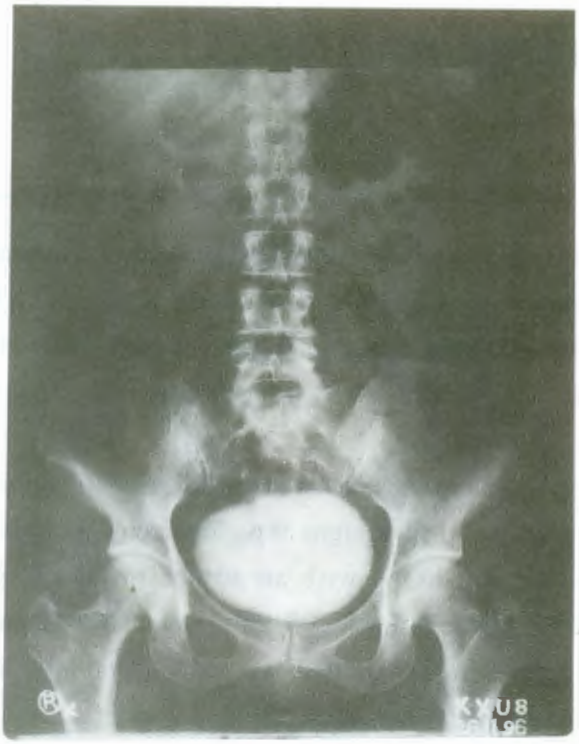
Plain X-Ray Abdomen & Pelvis :

Showed large vesical calculus.

US SCAN : Both kidneys normal size, mild distension of left pelvicalyceal system was noted.

Management :

Cystolithotomy and transperitoneal repair of the vesico-vaginal fistula was planned. Under general anaesthesia



Plain X-ray abdomen showing huge bladder stone.

the patient was placed in supine position with 10 to 15 degree Trendelenburg position. The vagina containing part of the stone was packed with 1% povidone iodine. Laparotomy was done through subumbilical midline incision. The gut was packed away from the field and a self retaining abdominal ring retractor was applied. The bladder was opened in the midline over the dome and extended posteriorly liberally to deliver the huge size impacted bladder stone (14.0 x 11.0 cms.) weighing 430gm. The posterior bladder incision was continued down the posterior wall till it reached the fistulous rim. The fistula was approximately of 5.0 x 5.0 cms. involving the upper part of the trigone. Both ureteric orifices were hardly 1.5 cms. away from the fistula margin. A Ureteric Catheter was inserted in each ureter to facilitate further mobilisation and repair. It was hard time to separate the bladder completely from the vagina due to previous surgeries (hysterectomy and VVF repair) but layers of vagina and bladder were identified well after excision of the fibrous rim of the fistula and patient dissection.

The vaginal defect was closed using 2/0 vicryl with interrupted sutures. The bladder mucosa was repaired with 2/0 intestinal catgut with interrupted sutures keeping the knots outside. The muscle wall of the bladder was approximated by interrupted sutures using 2/0 vicryl.

Thorough irrigation of abdomen with normal saline was done. A redivac drain was put in the pelvis. One Foley's catheter was inserted in the bladder through the extraperitoneal space by a separate stab incision and another Foley's catheter was inserted per urethra (only 5 ml fluid was used to inflate each Foley's balloon). A corrugated drain was put into the retropubic space and the abdomen closed in layers with vicryl No. 1. Intravenous ciprofloxacillin and metronidazole were given pre & post operatively. The intraperitoneal drain and the corrugated drain were removed after 48 hrs. The suprapubic catheter came out accidentally due to rupture of balloon on the 5th post-operative day. The urethral catheter was removed on the 14th day. The patient was discharged on 15th post-operative day with full continence.