CASE REPORT

Is Sacrocolpopexy Adequate for Cervico-uterine Prolapse in Patients with Classical Bladder Exstrophy?

Raamya Sathishkumar M. · Mavuduru Ravimohan S. ·
Agarwal Mayank M.

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Introduction

Patients presenting with classical bladder exstrophy in adulthood pose a difficult challenge for total genitourinary rehabilitation. The weak pelvic floor and poor uterine support make prolapse common. In the face of altered anatomical insertion of cervix, a standard posterior repair of uterine prolapse may not yield optimum results.

Case History

A woman (22 years) presented with classical bladder exstrophy with stage III cervico-uterine prolapse (POP-Q: Aa1, Ba0, C4, GH4.5, PB2.5, TVL6, Ap-3, Bp-3, and D0) with obstructive nephropathy (serum creatinine 2.5 mg/dl). Bladder-plate excision, ileal conduit urinary diversion, and Prolene® mesh sacrocolpopexy were performed. She made uneventful recovery. One year later, she presented with recurrence of prolapse. Pelvic examination revealed normally placed posterior fornix and prolapsing cervico-uterine unit through anterior vaginal wall (POP-Q: Aa-1,

Ba0, C2, GH4, PB2.5, TVL6, Ap-3, Bp-3, and D-5) (Fig. 1a). Reconstruction was performed as follows:

Midline laparotomy: both the round ligaments (RL) were detached from deep inguinal ring (Fig. 1b). Prolene® #1-0 sutures were placed on the uterine wall on either side beside the insertion of RL. Uterus was pulled up, and each RL–suture complex was taken out through a small incision in ipsilateral rectus sheath (Fig. 1c). The sutures were knotted with each other; RL sutured together and with the rectus sheath in buttressed fashion. Lower uterine segment was fixed to anterior abdominal wall. Adequate reduction was attained (Fig. 1d).

She made uneventful recovery and is free from genital prolapse at 1 year after surgery (POP-Q: Aa-3, Ba-3, C-3, GH4, PB2.5, TVL6, Ap-3, Bp-3, and D-5).

Discussion

Incidence of uterine prolapse in exstrophy patients is ~18 % and tends to occur at an early age. The reasons include anatomically poor *levator ani* support, short vagina, anteriorly placed uterus, poor muscular support to pelvic organs anteriorly, and horizontal orientation of pelvic floor.

Correction of cervico-uterine prolapse in these patients has been considered difficult, for poor pelvic support, anterior insertion of cervix, and partly urogynecologists' unfamiliarity with this anatomical variation due to its rarity. Hysterectomy is not preferred in patients desirous of pregnancy.

Raamya S. M., Senior Resident · Mavuduru R. S., Assistant Professor · Agarwal M. M. (✉), Assistant Professor
Department of Urology, Postgraduate Institute of Medical Education and Research, Level II, B Block, PGIMER, Nehru Hospital, Sector 12, Chandigarh 160012, India
e-mail: drmayank.22@gmail.com

Fig. 1 **a** Recurrence of cervico-uterine prolapse (POP-Q stage II) at one year follow up. **b** Round ligaments (*R*) are dissected from superficial attachments remaining attached to the uterus (*U*). **c** Round ligaments (*R*) along with the reinforcing Prolene® (size 0) sutures are taken out through ipsilateral rectus sheath. Prolene® (size 0) sutures are taken in lower uterine segment (*) for fixation to anterior abdominal wall. **d** Cervico-uterine unit seen from vagina optimally reduced

The literature on reconstruction of cervico-uterine prolapse in such patients is limited. In the largest published series, Stein et al. [1] described technique of ante-fixation of uterus and showed promising results. Since cervix is inserted low on the anterior vaginal wall, an anterior fixation analogous to cystocele repair would fix it. We performed our procedure based on this principle and attained favorable result. Nakhal et al. [2] presented their experience with surgical repair of prolapse in 23 adult women with exstrophy. Results of anatomical repairs (colposuspension, uterosacrocolpopexy, etc.) were poor, whereas, Gore-tex mesh uterine wrap procedure yielded 75 % long-term success rate. In our patient, the sacrocolpopexy fixed the vaginal apex optimally; however, cervico-uterine prolapse recurred because of abnormal insertion of cervix and vulnerable anterior wall support.

A mesh wrap of uterus may have been an alternative approach; however, the patient could not afford a mesh.

Moreover, we were concerned with feasibility of future pregnancy with this procedure.

Conclusion

The appropriate surgical management of apical and cervico-uterine prolapse in patients with classical bladder exstrophy should encompass posterior fixation of vaginal apex as well as anterior fixation of cervico-uterine unit.

References

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2. Nakhal RS, Deans R, Creighton SM, et al. Genital prolapse in adult women with classical bladder exstrophy. *Int Urogynecol J.* 2012;. doi:[10.1007/s00192-012-1717-z](https://doi.org/10.1007/s00192-012-1717-z).