19

Pushkar D[1], Sumerova N[2], Dyakov V[3], Gvozdev M[3]
1. *Professor and Chairman, Department of Urology of MSMSU, Moscow, Russia.,* ***2.*** *MD,* ***3.*** *MD, PhD*

TRANSPOSITION OF DISTAL URETHRA IN FEMALE PATIENTS WITH RECURRENT LOWER UTI ASSOCIATED WITH SEXUAL INTERCOURSE.

Synopsis of Video

This technically simple operation allows the elimination of peculiar «lateral tractions» that permanently displace the meatus into the vaginal lumen during intercourse and subsequent frictions by causing retrograde infection of the urinary tract by vaginal microflora. The operation makes it possible to withdraw the meatus from the area concerned and hence create conditions for further adequate anti-microbal therapy.

The patient is placed in the standard lithotomy position and a conventional cleansing preparation with a sterile covering is used. The procedure starts by analyzing existing urethral-hymenal fusions. In cases where these fusions are well-developed, and limit the mobilization of the distal part of the urethra, they should be dissected widely in the transverse fashion. In order to mobilize the distal part of the urethra and create a submucosal bed for subsequent urethral transposition, an inverse tennis racket incision is performed with a fine 11 blade scalpel. The distal portion of the urethra should be exposed widely in order to be fixed as close as possible to the clitoral area in the submucosal bed already created. The edges of the distal urethra are fixed by interrupted sutures from synthetic absorbable material (Vicryl, Monocryl 4/0) to the tissue of the vaginal vestibule in the formed bed. Sufficient mobilization of the distal part of the urethra should provide tension-free fixation in the apical part of the submucosal bed. Tension-free fixation can be achieved by both careful and wide mobilization of the distal urethra and the suturing of previously transversely dissected hymenal fusions longitudinally. Care must be taken to provide secure fixation of the external meatus in a new area with the final step of the operation being vaginal mucosa closure. In cases of vaginal anatomical narrowness, encountered in nulliparas, or marked hymenal rings, the described operation is supplemented by a hymenectomy that enlarges the vaginal orifice and creates the optimal conditions for further sexual life, minimizing bacterial contamination {1}.

Hypothesis / aims of study

Recurrent lower UTI is often associated with sexual intercourse {2}. Usually these patients are young females. Repeated courses of antibiotic therapy help some, but not all patients {3}. Distal urethra vaginal ectopy seems to play an important role in accumulating micro-organisms, resulting in recurrent UTI. The repositioning of the distal part of the urethra may potentially minimize microbal contamination in this area. The purpose of this study is to share the results of minimal invasive procedures, such as distal urethral transposition, in the treatment of female patients with symptomatic UTI associated with sexual intercourse.

From 1995 to 2008 three hundred and twenty eight woman (mean age 25,9 years) with recurrent symptomatic lower UTI associated with sexual intercourse and repeated unsuccessful conventional treatment were found to have intravaginal urethral displacements during vaginal examinations in the Urology Department of MSMSU. All patients were initially diagnosed and treated for chronic cystitis and urethritis for at least 6 months without success. Two hundred and seventy one female patients underwent surgical treatment for recurrent UTI associated mainly with sexual intercourse – Group I – a procedure depicted on a DVD provided with this abstract. 57 patients (mean age 25,9) with the same histories, anatomical findings, and symptoms and signs of lower UTI, receiving conventional treatment, served as controls – Group II. The mean follow up time of the 271 patients from Group I was 52,5 months (48 – 57 months). All patients were required to avoid sexual intercourse postoperatively for one month and were treated with standard antibiotic therapy for a mean time of three weeks.

Results

Patients from Group I were evaluated after three months, showing no postoperative complications. Those who wished to begin sexual activity were able to do so after one month. Examinations of 204 (75,3%) patients from Group I one year later showed no symptoms or signs of UTI. 67 (24,7%) patients required further antimicrobial prophylaxis after the procedure because of the longer preoperative duration of their symptoms. 19 patients (7,1%) showed poor results. 183 patients were available for additional examinations after three and five years, (mean 52,5 months) revealing stable results with no lower UTI for these patients.

Group II patients were followed up for one year. 46 (80,7%) of them were found to have recurrent symptoms with poor response to the therapy, and had to undergo repeated treatment.

Interpretation of results

Distal urethral transposition is feasible, replicable, and can be used for these patients, leading to good and stable results in 92% of cases.

Concluding message

Young female patient suffering from recurrent lower UTI should be evaluated with a specific emphasis on possible intravaginal urethral displacement during sexual intercourse {4}. Conventional treatment can be long and often unsuccessful for the majority of patients. Careful mobilization of the distal part of the urethra with modern technology and fine absorbable suture materials provides minimal invasion and may be considered an option for patients with recurrent UTI associated with sexual intercourse. It should be emphasized that we do not advocate this procedure as a primary choice. This means that all patients showing this type of UTI should be initially treated conservatively, and scheduled for surgery only if this treatment is unsuccessful.

References

1. Reed J. F. Urethral - hymenal fusion: a cause of chronic adult female cystitis. The Journal of Urology. 1970, vol. 103, ?4 pp. 374 - 378
2. Stamatiou C, Bovis C, Panagopoulos P – Sex-induced cystitis – patient burden and other epidemiological features. Clin Exp Obstet Gynecol. 2005;32(3):180-2

3. Naber KG. Treatment options for acute uncomplicated cystitis in adults. Urological Clinic, Hospital St Elisabeth, Straubing, Germany. J Antimicrob Chemother. 2000 Sep;46 Suppl 1:23-7; discussion 63-5

Specify source of funding or grant	**No disclosures**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Ethics committe of Moscow State Medical Stomatological University**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**