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# Cystocele and Sensory Urgency – Our Experience

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## ABSTRACT

*Sensory urgency appears mostly in patients with a specific or non specific cystitis, interstitial cystitis, intravesical foreign bodies, bladder carcinoma and carcinoma of the prostate, infravesical obstruction, estrogen deficiency and in some neurologic and psychiatric diseases. The aim of this study was to analyze and explain the relation between vaginal vault prolapse and sensory urgency. Clinical courses of 64 patients with cystocele, which between 1999 and January 2006 have been treated on the Clinic of urology, University Hospital, Rijeka, Croatia, were analyzed retrospectively. On physical examination, using the International Society for Continence staging system we found that 4 (0.6%) had grade II, 29 (45.3%) had grade III, and 31 (48.4%) had grade IV cystocele. Forty-seven (73.4%) women had urgency, for minimally 6 months to many years before the vaginal vault prolapse manifestation. In all but 3 (4.6%) an extended anterior vaginal colporaphy has been done, with only 1 (1.6%) recurrence of cystocele. It seems that sensory urgency may in fact be a predictor of cystocele.*

**Key words:** anterior vaginal colporaphy, cystocele, sensory urgency

## Introduction

Sensory urgency appears mostly in patients with a specific or non specific cystitis, interstitial cystitis, intravesical foreign bodies, bladder carcinoma and carcinoma of the prostate, infravesical obstruction, estrogen deficiency and in some neurologic and psychiatric diseases<sup>1–5</sup>. A relation between sensory urgency and a threatening cystocele, mostly in elderly women, might be possible. The aim of this study was to analyze and explain the relation between the type and grade of the vaginal vault prolapse and sensory urgency. There are no diagnostic procedures which could provide evidence of sensory urgency, so we have to lean on the usually diagnostics of the vaginal vault prolapse, urodynamics and clinical course.

## Patients and Methods

Clinical courses of 64 patients with cystocele, which between January 1999 and January 2006 have been treated on the Clinic for urology, University Hospital, Rijeka, Croatia, were analyzed retrospectively. Nine (14%) of 64 patients presented with urgency at first visit, 55

(86%) patients visited the doctor because of already extended vaginal vault prolapse, 5 (9%) of them with and 50 (91%) without complaining the urgency. Fifteen patients (23.5%) had straining and residual urine, 8 (12.5%) patients had a concomitant stress urinary incontinence. Nine patients, which presented at first with urgency, but without an evidence of a vaginal vault prolapse, developed prolapse during the next 2–13 months.

Four (6.25%) of them presented by them self, in the remaining 5 (7.8%) patients a cystocele was found at the routine control examination.

All patients underwent a meticulous clinical evaluation, including a complete history and physical examination, urinary questionnaire, voiding diary, cystography, urodynamics and cystoscopy. In 61 (95.3%) of 64 patients an extended anterior colporaphy was performed, an additional bladder neck suspension for concomitant stress urinary incontinence had to be performed in 4 (6.2%) patients. In one patient (1.5%) we performed simultaneously the closure of a vesicovaginal fistula, located in the middle of the cystocele. The remaining, not yet operated 3 (4.7%) patients, at the moment with grade II and III

cystocele, did still not decide for an operation. In all operated patients the indwelling catheter was removed on the 3<sup>rd</sup> postoperative day, with no evidence of residual urine. We had no major intraoperative complications. Patients were followed up between 6 and 47 months, with a mean of 13.1 months.

## Results

The range of the age of our patients was 36–84 years, with a mean of 64.33 years. The highest incidence of the cystocele was found in the group from 70–79 years. Our patients had 1–4 births, 14 of all had difficult births. We noticed no direct correlation between a difficult birth and the occurrence of cystocele. Of the 64 patients, 53 (8.3%) had a middle line defect cystocele and 11 (17%) had a paravaginal defect cystocele. Using the »International Society Staging System«, we found that in the group of patients with middle line cystocele, 4 (6.2%) had grade II, 19 (29.6%) had grade III, and 29 (45.3%) had grade IV cystocele. Only 1 patient with paravaginal defect cystocele had grade II, 10 (15.6%) of them had grade III cystocele (Table 1). Of the 64 patients, 47 (73.4%) had urgency, for minimally 6 months to many years before the vaginal vault prolapse manifestation, 35 (54.6%) patients reported frequency between 5–15 and 46 (71.8%) had nocturia 1–5 times. Urgency disappeared with the onset of the manifest prolapse in 42 (65.6%) patients, and they just felt uncomfortable due to the bothering prolapse. Nine patients (14%) had a concomitant stress urinary incontinence, one (1.5%) of them combined with urge incontinence. In our study only six patients (9.4%) had evidence of the residual urine, in range from 50–200 ml. Urinary tract infection was found in only 8 (12.5%) patients (*Escherichia coli* in 3, *β-streptococcus* in 2, *Proteus mirabilis* in 1, *Enterococcus* in 1 and *Cytrobacter* in 1 patient).

After an extended anterior vaginal colporaphy in 61 (95.3%) patient has been done, frequency and urgency disappeared immediately postoperatively in all but 5 (7.8%) patients. Fifteen patients (23.4%) with preoperative straining had after the operation a normal voiding. No patient had postoperatively evidence of residual urine. Maximal bladder capacity increased from 420 ml before the operation to 510 ml after the operation, and the mean day time voided volume from 150 ml to 235 ml. Despite the fact that in 4 (6.2%) patients the inner layer of the suture had to be removed, in our population we had

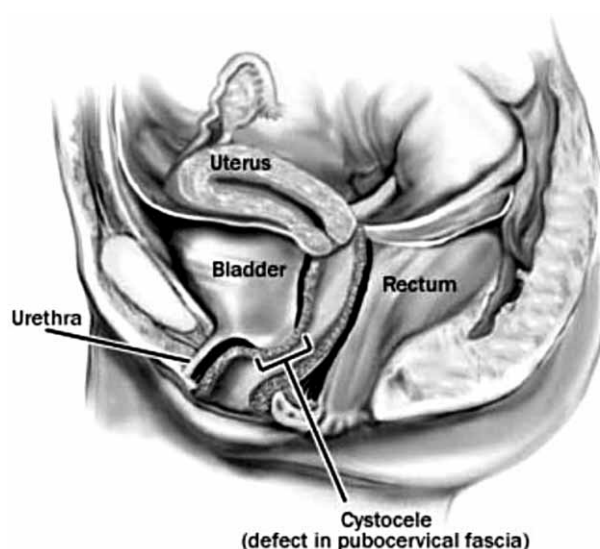


Fig. 1. Cystocele (With permission of Mr. J. R. Miklos).

only one recurrence of the prolapse. Our objective cure rate of the vaginal vault prolapse was 98.5%. Less satisfying was the postoperative occurrence of a mild stress urinary incontinence in 3 (4.7%) and persisting severe stress urinary incontinence in 2 (3.1%) patients.

Four (6.2%) subsequent complications included intensive development of granulations in the wound, which made an excision of the inner suture layer necessary.

## Discussion and Conclusion

Prolaps is the protrusion of a pelvic organ beyond its normal anatomical confines. It represents the failure of fibromuscular supports (Figure 1)<sup>1–5</sup>. In sensory urge incontinence the micturition reflex is been provoked through intensified afferent impulses from the bladder wall stretch receptors, despite a normal central motoric inhibition<sup>6</sup>. As known, especially the area of trigonum is as rich with stretch receptors. Sensory urgency appears mostly in the early phase of evolution of the cystocele, with no lasting prolapse of the bladder, but only reversible stretching present. In the phase when the cystocele becomes manifest, in the majority of patient's urgency disappears and as the main symptom remains bothering due to the prolapse. It is obvious that in the initial phase

TABLE 1  
DISTRIBUTION OF CYSTOCELE RELATIVE TO THE AGE AND GRADE

Age	30–39	40–49	50–59	60–69	70–79	80–89
Grade I	0	0	0	0	0	0
Grade II	1	0	1	2	1	0
Grade III	0	5	13	4	5	0
Grade IV	0	1	3	7	19	2
Total	1 (1.5%)	6 (9.3%)	17 (26.5%)	13 (20.3%)	25 (39%)	2 (3.1%)

of evolution of a cystocele the stretch receptors have been permanent irritated. In a definitively developed cystocele with overstretching of the trigonum, most of the sensory nerve fibers probable have been destroyed. The consequence is loss of symptoms of sensory urgency. The history of our patients had typical onset of urgency, between a few months and more then a year before the manifestation of the prolapse. With the progression of cystocele the symptoms diminished, so that in almost all patients with cystocele grade III and IV, it was only the bother due to mechanical irritation of the prolapsed vaginal vault present. These findings prove that both groups of the authors, which had controversies about the

relation between vaginal vault prolapse and sensory urgency, those with positive, as well those with negative statements, were each only in a part right<sup>7–13</sup>.

In conclusion, female, particularly elderly patients, complaining for urinary urgency or urge incontinency, with negative urodynamical findings, should obligatory underwent a vaginal examination with full bladder and straining to exclude an imminent or evident vaginal vault prolapse. Is there no any evidence of a cystocele, the patient should be followed up, with repeated vaginal examination every 3 months. In case of evidence of a cystocele a low risk operative procedure with very good postoperative results is possible.

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## CISTOCELE I SENZORIČKA URGENCIJA – NAŠA ISKUSTVA

### SAŽETAK

Senzorička urgencija javlja se ponajprije u bolesnika sa specifičnim ili nespecifičnim cistitisom, intersticijalnim cistitisom, intravezikalnim stranim tijelom, karcinomom mjehura, prostate, intravezikalnom opstrukcijom, manjkom estrogena te u nekim neurološkim i psihijatrijskim bolestima. Cilj ove studije bio je objasniti vezu između vaginalnog prolapsa i senzoričke urgencije. Analizirali smo klinički tijek 64 bolesnice Klinike za urologiju, Kliničkog bolničkog centra, Rijeka, Hrvatska koje su liječene od 1999–2006. godine. Pri fizikalnom pregledu, a prema bodovnom sustavu Međunarodnog udruženja za kontinenciju, pronašli smo u 4 bolesnice (0,6%) prolaps II stupnja, u 29 (45,3%) III, a u 31 (48,4%) prolaps IV stupnja. Četrdeset i sedam bolesnica (73,4%) imalo je urgenciju najmanje 6 mjeseci prije manifestacije prolapsa. U svih osim u 3 (4,6%) bolesnica učinjena je ekstenzivna prednja vaginalna kolporafija. Rekurencija je iznosila samo 1,6%. Možemo zaključiti kako urgencija može prejudicirati pojavu cistocele.