Postvoid Residual Urine Measurement in Parous Women with Lower Urinary Tract Symptoms: A Prospective Analytic Study

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Abstract

Background: There are many different bladder complaints that are classified as lower urinary tract symptoms (LUTS). These could be divided into three classes; frequency and nocturia, and storage manifestations of urgency either in presence or absence of urgency urinary incontinence (UUI). Other LUTS include voiding problems like straining, hesitancy, a sense of incomplete emptying, and slow stream. Most of these symptoms are related to vaginal delivery (VD), however bladder dissection during cesarean delivery (CD) may associated with such symptoms.

Objective: To assess the post voiding residual urine and LUT symptoms in parous women with different routes of delivery.

Patients and Methods: We recruited 80 females who were distributed into two groups according to the mode of previous deliveries; group A that included females with previous VD (40 patients) and group B that included females with previous cesarean delivery (40 patients), they were subjected to full history taking (to analyze the presence of different symptoms and other risk factors) and clinical examination (including local examination to assess the state of the pelvic organs). Trans-abdominal ultrasound examination was done to evaluate post-Void Residual (PVR) urine volume was measured in all the cases and correlated with the other symptoms and signs.

Results: There was statistically significantly higher prevalence of positive stress test in the VD group. The mean PVR was statistically significantly elevated in the VD group In comparison with cesarean delivery. There was no statistically significant difference between the two groups in terms of LUTS such as frequency, nocturia, urgency, slow stream, splitting, intermittent stream, hesitancy, straining, and terminal dribbling. The prevalence of incomplete emptying and post micturition dribbling was statistically significantly elevated in the VD group. Degree of prolapse was statistically significantly elevated in the vaginal delivery group.

Conclusion: The current study revealed that; PVR urine

volume was found to be higher in parous women after VD and complaining of pelvic organ prolapse (POP). We recommend using PVR evaluation as a screening approach for all women complaining of LUT symptoms and with history previous vaginal delivery.

Keywords: Lower Urinary Tract Symptoms, Parous Women, Post-Void Residual Urine Volume.

Introduction

Storage, voiding, and manifestations after micturition are three types of LUTS (1). Women can have stress and urge incontinence at the same time, and women voiding dysfunction manifestations are frequently accompanied by manifestations after micturition. (2). The sensation of an incomplete void is said to be more prevalent among postmicturition symptoms in women than post-void dribbling. (3).

It was found that 8.5% of females have experienced the sensation of being empty inside. It is well-known that the prevalence rises at the age of 40 and stays constant at 10% among older people. (4).

PVR measurement appears to be crucial for quality of life (QoL) as it lowers functional bladder capacity and contributes to LUTS. Additionally, it raises the risk of urinary tract infections (UTI). A risk for acute urinary retention only exists if PVR is rising quickly. Urinary infections, bladder stones, and LUTS are frequently linked to urinary retention. Renal failure and hydronephrosis may result from elevated intravenous pressures. (5).

Urinary catheterization and bladder ultrasound are two different techniques used to measure PVR. There are benefits and drawbacks to both methods. Though time-consuming and risky of discomfort, urethral injuries, and UTI, sterile catheterization can give urine samples a more accurate volume. A portable device can be used anywhere to perform bladder ultrasound, that is a quick, noninvasive procedure. (6).

We aimed to evaluate the relationship between LUTS in parous women and PVR urine volume.

Subjects and Methods

This was a prospective cross-sectional study conducted at obstetrics and gynecology department, Mansoura university hospitals, Mansoura, Egypt. The study was conducted for 1 year duration. This study included 80 female patients with LUTS. They were divided into two groups; group (A) comprised 40 cases with previous vaginal delivery (VD) and group (B) comprised 40 patients with previous cesarean delivery. We included females with age ≥40 years old, with history of VD or CD and were complaining of feeling of LUTS included storage symptoms, voiding manifestations and post-voiding symptoms. The study was approved by the institutional review board of the faculty of medicine, Mansoura University.

Entire cases were subjected to history taking that included; personal history (age, residency, educational level, occupation and contact numbers), past medical history (Diabetes mellitus and cardiac diseases), past surgical history (any previous gynecological operations), detailed obstetric history (Gravidity, parity, full term normal delivery, preterm labor, stillbirth, difficult labors, cesarean section, date of last delivery, abortion, previous pregnancies (complicated or not), previous purperia (complicated or not). LUTS included storage manifestations (frequency, nocturia, urgency), voiding manifestations (slow stream, splitting, intermittent stream, hesitancy, straining, terminal dribbling) and post voiding manifestations (incomplete emptying, post-micturition dribbling). Each symptom was analyzed regarding the onset, course, duration, aggravating symptoms and relieving symptoms.

Tin order to detect the frequency of symptoms

associated with pelvic floor diseases, use frequency of LUTS. 10,11 Each of the 11 questions on the FLUTS asks about the frequency (never, 0; occasionally, 1; sometimes, 2; most of the time, 3; always, 4). (7). We considered a prevalence score of at least 2 (at least sometimes) as positive for having the symptom

General examination was concentrated on a general examination of the patient's appearance, body composition, and body mass index (BMI).

Local examination included inspection of vulva, perineum, and during straining for stress incontinence and prolapse. Digital palpation was done while patient was in dorsal position, lubricated index & middle fingers of gloved right hand are introduced through vaginal opening while separating labia with index & thumb of left hand. Palpation included vaginal walls, Vaginal fornices, portio vaginalis of cervix, Levator ani tone, perineal body (pb) thickness and bartholin gland. Bimanual examination was done to assess uterus (position, shape, size, surface, consistency, mobility, tenderness), Adnexa, Douglas pouch and parametrium. Cusco's speculum examination included assessment of portiovaginalis of cervix and lateral vaginal walls.to per form stress test we asked the patients to cough with 1/2 full bladder (with about 200 ml urine in UB). Test was positive if there was escape of urine from urethra limited to period of increased intra-abdominal pressure (if test was negative in lithotomy position we perform it in standing position).

We evaluated POP using POP Quantification (POPQ) System. It consists of 6 points of support around vagina & 3 measurements; points Aa 3 cm above hymenal ring anteriorly, Ap 3cm above hymenal ring posteriorly, Ba Lowest point of prolapse (most dependant point of vaginal wall) anteriorly, Bp Lowest point of prolapse (most dependent point of vaginal wall) posteriorly, C Cervix, D Douglas pouch, Total vaginal length (TVL) Measured at rest, genital hiatus (gh) Measured from middle of urethral meatus anteriorly to hymenal ring posteriorly, and pb. Measured from posterior aspect of gh to mid-anal opening. Hymenal ring was chosen as reference point as it is more precise than introitus. Points are measured in centimeters & are assigned negative (if there is no prolapse) & positive (in prolapse). The Stages included Stage zero shows no prolapse, Stage I where the most proximal portion of the prolapse is greater than one cm above the level of the hymen, Stage II where the most proximal portion of the prolapse is one cm or less proximal or distal to the hymenal plane, Stage III where the most distal portion of the prolapse extends more than one cm below the hymen but no more than two cm less than the TVL and Stage IV where vaginal eversion is essentially complete (procidentia).

Post voidal residual urine estimation was done using trans abdominal ultrasound. The internal volume calculations of the ultrasound device or the mathematical formula are used to determine the bladder's volume. While the patient was lying on his or her back, the suprapubic area was probed. Both the sagittal and transverse planes of the bladder were captured in the images. The largest superior-inferior (height), anterior-posterior (depth), and transverse (width) distances were noted. (8).

Statistical analysis

Collected data was coded, tabulated and introduced to a PC using SPSS (IBM Corp. Released 2017, IBM SPSS Version 25.0, Armonk, NY). Data were presented and suitable analysis was done based on the type of data obtained for all parameters. Kolmogorov-Smirnov test was utilized as a test of normality, in cases when the significance level is more than 0.05, then normality is assumed. Mean±SD was utilized for parametric numerical data, on the other hand median, and range were utilized for nonparametric numerical data. Frequency and %age were utilized for non-numerical

data. Student T, U test, Chi-Square test, Fisher's exact test, and Monte-Carlo test were utilized. With regard to all the previous tests, P-values < 0.05 are considered significant.

Results

The current study comprised 80 females who were distributed into two groups according to the mode of previous deliveries; group A that included females with previous vaginal delivery (VD) (40 patients) and group B that included females with previous cesarean delivery (CD) (40 patients). We found that there was no statistically significant difference between both groups as regards the age (p= 0.271) and BMI (p= 0.080). It demonstrates that there was no statistically significant difference in the presence of comorbidities between both groups. There was no statistically significant difference in the two groups' prior surgical experiences (p = 0.256). There was no statistically significant difference between the two groups regarding the uterine findings (p= 0.062), Table (1).

We found no statistically significant difference between the two groups regarding the LUTS, however, the incidence of incomplete emptying was statistically significantly higher in the vaginal delivery group (60% vs 27.5% in the cesarean delivery group) (P = 0.003). The incidence of postmicturition dribbling was statistically significantly higher in the vaginal delivery group (60% vs 32.5% in the cesarean delivery group) (P = 0.014) , Table (2) .

The degree of POP was statistically significantly higher in the vaginal delivery group (p= 0.048). Also, the prevalence of cystorectocele was statistically significantly higher in the vaginal delivery group (p< 0.001). It shows that there was statistically significantly higher prevalence of positive stress test in the vaginal delivery group (p< 0.001). The mean PVR was statistically significantly higher in the vaginal delivery group in comparison with the cesarean delivery (171.25 ± 78.54 vs 129 ± 48.95 ml respectively) (p= 0.032) ,Table (3).

PVR was higher in the cases who delivered by vaginal delivery with and without the symptoms of LUTS except in cases with and without postmicturition dribbling and the cases without Incomplete emptying where the PVR was higher in the cases with previous cesarean delivery, Table (4).

There was no statistically significant difference in the PVR between the cases with previous vaginal of cesarean delivery according to the degree of prolapse and the results of stress test. However, PVR was higher in the cases who delivered by vaginal delivery with and without Cystorectocele as compared to the cases with cesarean delivery, Table (5) .

Discussion

We conducted a study to detect the correlation between PVR urine volume and LUTS in parous women. Our study included 80 females who were distributed into two groups according to the mode of previous deliveries. In our study the mean PVR was statistically significantly elevated in VD group as compared to cesarean delivery (171.25 ± 78.54 vs 129 ± 48.95 ml respectively) (p= 0.032). Salman et al., conducted a study for 54 women, (37%) underwent an elective cesarean section, and (63%) gave birth vaginally. Pre-labour PVRVs was fund statistically significant higher than postpartum mean PVRVsr (215ml versus 13ml, p.001).Also, abnormal postpartum PVRV was statically significantly higher after VD in comparison with CD (73.5 % vs. 45 %, p 0.05). Mode of delivery had a negative impact on voiding functions. VD is linked to a more voiding dysfunction in comparison to CD. (9).

In a 2014 , Al-Mandeel et al., conducted a study for 236 primiparous women (81 %) gave birth vaginally, and (19 %) underwent a primary elective cesarean section. They

concluded that VD group had a higher postpartum PVRV rate. (8.3 %) of the females who underwent a CD had PPVD, in comparison with (20.2 %) in the VD group (P=0.05) (10).

In our study, the LUTS symptoms were Frequency (27.5%) Nocturia (37.5%) Urgency (25%), Slow stream (35%), Splitting (20%), Hesitancy (25%), Straining to urinate (17.5%), Terminal dribbling (17.5%), Incomplete emptying (27.5%) and Postmicturition dribbling (32.5%) in CD group.

Al-Anbary et al, conducted a study for 187 patients with previous CD. Stress incontinence was found in 35.29 % of patients, while straining and hesitancy to urinate were found in 11.76 %. Frequency was found in 23.5% of patients, urgency in 35.29 % of patients, urge incontinence in this study was accompanied by urgency, nocturia in 14.7% of patients , all of whom complained of frequency and urge incontinence, and dysuria in 26.47 % of patients . There were no reports of weak flow, prolonged voiding, terminal dribbling, or urine retention. (11). The low frequency of these LUTS symptoms was also discovered by Altman et al., similar to this study , they found that 7.6% of people had urinary urgency, and 2.5% had incomplete emptying their bladder. (12).

Women who underwent a single VD or a cesarean section did not have a higher risk of LUTS progression, according to Maserejian et al.,(13). cesarean sections lower incidence against the emergence of LUTS, according to Zhang et al., (14).

The current study demonstrated that; there was no significant difference between both groups with regard to the LUTS including frequency (p=0.805), nocturia (p=0.496), urgency (p=0.228), slow stream (p= 0.469), splitting (p=0.204), intermittent stream, hesitancy (p= 0.152), straining to urinate (p= 0.121) and terminal dribbling (p= 0.075). The incidence of incomplete emptying was found to be statistically significantly higher in the VD group (60% vs 27.5% in the CD group) (P = 0.003). The incidence of postmicturition dribbling was statistically significantly higher in the VD group (60% vs 32.5% in the CD group) (P = 0.014). All symptoms were lower in the CD group. The postal questionnaires were returned by 309 the women who gave birth naturally via vagina and the 208 who chose to have elective cesarean sections, according to Baud et al., Women who underwent elective cesarean sections were significantly less likely to experience urge incontinence and urine leakage while exercising compared to those who gave birth naturally. Contrarily, compared to uncomplicated VD, women who underwent elective cesarean sections were more likely to report lower abdominal pain. Females suffering from one or more symptoms were significantly more frequent after uncomplicated vaginal deliveries than elective cesarean section. (15).

According to Li et al., the VD group was demonstrated to be accompanied by a significant increase in voiding LUTS prevalence. In comparison to the VD group's value of 23.6 %, the incidence of storage LUTS in the CS group was 14.4 % (P 0.001). Urgency was reported as the most frequently encountered symptom in both groups (16.3% in CD versus 9.8% in VD). Urgency (13.9%) and SUI (19.2%) were the two conditions that affected the CS group the most frequently, while UUI (19.2%) and SUI (17.9%) were the two conditions that affected the moderately to severely bothersome LUTS the most frequently after VD. (16).

According to Rortveit et al., CS and VD patients had a 2.3- and 1.5-fold higher risk of urinary incontinence than nulliparae, respectively. When VD and CS were compared together, only stress incontinence was demonstrated to be accompanied by a 2.4 fold increased risk; urge incontinence was unaffected. (17).

Gyhagen et al., examined the data of 5236

Singleton primipare who gave birth between 1985 and 1988 but had no additional children (n = 5236). They also found that the possibility of urinary incontinence increased 1.67 fold after VD in comparison with CS without separating urge incontinence from stress incontinence. (18).

These outcomes may be clarified by the fact that cesarean sections avoid the straining effect of virginal delivery, as well as potential genitourinary tract laceration and instrumental delivery, and have a lower impact on the pelvic floor muscles (PFM) and lower urinary tract. (19,20).

The foetus could induce direct damage to the pelvic floor, anal sphincter, and perineum during the VD as it passes through the soft birth canal. According to studies, the strength of the pelvic organ muscle is the best predictor of SUI in primiparous females six months following VD (21). Women in the CS group have significantly stronger PFMs compared to those in the VD group. (22).

However, 324 females, 378 nulligravida, 473 vaginal births, and 473 cesarean births were included in Khosla et al., study, there were higher odds of nocturia in respondents who had previously delivered vaginally (OR = 1.42, 95 %, p = 0.039) and cesarean section (OR=1.42, p=0.039), although there were no differences between both groups. (23).

The degree of prolapse was a statistically significant increase in the VD group (p= 0.048) in the current study. Furthermore, the prevalence of cystorectocele was statistically significantly higher (p less than0.001) in the VD group. It demonstrates that the VD group had a statistically significantly higher prevalence of positive stress tests (p 0.001). Furthermore, the current study's findings revealed that the VD group had a statistically significantly higher prevalence of positive stress tests (p less than 0.001).

Tsui et al., conducted a retrospective cohort study on 51587 women who had CD and 51,587 females who delivered vaginally (VD). They found that the incidence of SUI and POP was higher in the VD group than in the C/S group (1.6/1000 subject-years and 1.5/1000 subject-years, correspondingly) (0.8 and 0.6 in 1000 subject-years). VD was accompanied by a higher risk of POP and SUI when compared to C/S (hazard ratio (HR): 1.96%, 95% respectively)). (24).

Yang and Sun included 1527 females underwent CSD and 2944 women had a VD. The results showed that there were significant differences in PFM strength, vaginal muscle voltage, maximum urinary flow rate, stress urinary incontinence and POP between the CD group and the VD group. (25).

Hage-Fransen et al., have demonstrated that episiotomy, instrumental VD tears, constipation, and UI during pregnancy are all risk factors for UI at postpartum. Risk factors for postpartum AI include AI during pregnancy, maternal age more than 35, prenatal BMI >30kg/m2, instrumental VD, spontaneous VD, oxytocin augmentations, and newborn > 4000g. (26).

Levator avulsion detachment during VD can happen partially or completely as a result of the foetal head crowning. In other words, the levator hiatus was made larger by the puborectalis muscle avulsion brought on by its insertion on the pelvic sidewall. (27). Forceps delivery may require more space, faster expansion, and stronger force than vacuum or normal VD, increasing the risk of pelvic floor trauma. (28).

The current study is constrained by the small number of cases it included compared to previous studies and by the fact that it only included cases from one center. This might reduce the validity of the results and should be considered in further study.

Conclusion

The current study concluded that; PVR urine volume was found to be higher in parous women after VD and complaining of POP.

We recommend touse PVR evaluation as a screening modality in the context of all women complaining of LUT symptoms and with history previous VD.

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Table (1): Demographic, base line and Ultrasound Findings data of the two studied groups.

	Groups				Test of significance
	Group A (Vaginal delivery) (N=40)		Group B (Cesarean delivery) (N=40)		
Age and Body Mass Index					
Age (years) Mean ± SD	54.48 ± 10.51		56.65 ± 6.61		t = -1.108 p = 0.271
Body Mass Index (Kg/m²)	**31.04 ± 4.17**		**30.56 ± 3.97**		t = 1.784 P= 0.080
Number of previous vaginal deliveries and cesarean deliveries					
Number of previous vaginal delivery	**Median (Range)** 4 (3-12)				
Number of previous cesarean delivery			1 (1-4)		
Medical history and Comorbidities					
Variable	**N**	**%**	**N**	**%**	
Hypertension	10	25 %	10	25 %	$\chi 2 = 0$ P = 1
Diabetes	7	17.5 %	8	20 %	$\chi 2 = 0.082$ P = 0.775
Epilepsy	0	0 %	1	2.5 %	FET = 1.013 P = 0.314
Cardiac	0	0 %	2	5 %	FET = 2.051 P = 0.152
Stroke	1	2.5 %	0	0 %	FET = 1.013 P = 0.314
Thyroid disorders	2	5 %	0	0 %	FET = 2.051 P = 0.152
Surgical history					
Free	26	65 %	21	52.5 %	$\chi 2 = 1.289$ P = 0.256
Positive	14	35 %	19	47.5 %	
Ultrasound Findings					
Uterine findings					
Free	34	85 %	26	65 %	MC = 6.971 P = 0.062
Adenomyosis	0	0 %	2	5 %	
Myoma	3	7.5 %	11	27.5 %	
Polyp	1	2.5 %	0	0 %	
Removed polyps/myoma	2	5 %	1	2.5 %	
Adnexal findings					
Free	39	97.5 %	37	92.5 %	MC = 2.053 P = 0.385
Ovarian cyst	0	0 %	2	5 %	
Removed cyst	1	2.5 %	1	2.5 %	

P: probability. Continuous data are expressed as (mean ± SD) SD: Standard Deviation. T: independent samples t-test. Categorical data expressed as Number (%).
χ2: Chi-Square test, FET= Fischer's exact test, MC: Montecarlo test, Continuous data are expressed as median (range).

Table (2): Analysis of lower urinary tract symptoms (LUTS) in the two studied groups.

	Groups				Test of significance
	Group A (Vaginal delivery) (N=40)		Group B (Cesarean delivery) (N=40)		
	N	%	N	%	
Frequency	12	30 %	11	27.5 %	χ2 = 0.061 P = 0.805
Nocturia	18	45 %	15	37.5 %	χ2 = 0.464 P = 0.496
Urgency	15	37.5 %	10	25 %	χ2 = 1.445 P = 0.228
Slow stream	11	27.5 %	14	35 %	χ2 = 0.524 P = 0.469
Splitting	13	32.5 %	8	20 %	χ2 = 1.614 P = 0.204
Intermittent stream	0	0 %	0	0 %	----------
Hesitancy	16	40 %	10	25 %	χ2 = 2.051 P = 0.152
Straining	13	32.5 %	7	17.5 %	χ2 = 2.400 P = 0.121
Terminal drippling	14	35 %	7	17.5 %	χ2 = 3.164 P = 0.075
Incomplete emptying	24	60 %	11	27.5 %	χ2 = 8.584 **P = 0.003***
Postmicturition drippling	24	60 %	13	32.5 %	χ2 = 6.084 **P = 0.014***

P: probability. Categorical data expressed as Number (%). χ2: Chi-Square test *: statistically significant (p< 0.05).

Table (3): Analysis of prolapse, Cystorectocele, and PVR in the two study groups.

	Groups				Test of significance
	Group A (Vaginal delivery) (N=40)		Group B (Cesarean delivery) (N=40)		
	N	%	N	%	
Degree of prolapse					
Negative	3	7.5 %	8	20 %	MC = 7.808 **P = 0.048***
First degree	13	32.5 %	20	50 %	
Second degree	13	32.5 %	7	17.5 %	
Third degree	11	27.5 %	5	12.5 %	
Cystorectocele					
Absent	5	12.5 %	21	52.5 %	$\chi2$ = 14.587 **P < 0.001***
Present	35	87.5 %	19	47.5 %	
Stress test					
Negative	11	27.5 %	25	62.5 %	MC = 24.889 **P < 0.001***
Present	15	37.5 %	10	25 %	
Present (mixed UI)	13	32.5 %	5	12.5 %	
Complete UI	1	2.5 %	0	0 %	
PVR (ml)					
Mean ± SD	171.25 ± 78.54		129 ± 48.95		z = -2.148 **p = 0.032***
Range	60 - 295		60 – 225		

P: probability. Categorical data expressed as Number (%). $\chi2$: Chi-Square test, MC: Monte-carlo test.

*: statistically significant ($p< 0.05$).

Table (4): PVR according to symptoms in the studied groups.

Symptoms		Group A (VD)	Group B (CD)	P value
Frequency	**Absent**	173.57 ± 82.56	119.48 ± 45.54	**0.003***
	Present	165.83 ± 71.38	154.09 ± 50.83	0.657
Nocturia	**Absent**	150.45 ± 74.29	131.60 ± 51.23	0.312
	Present	196.67 ± 78.05	124.67 ± 46.31	**0.004***
Urgency	**Absent**	163.60 ± 83.80	135 ± 50.15	0.124
	Present	184 ± 69.78	111 ± 42.41	**0.007***
Slow stream	**Absent**	161.55 ± 84.17	127.69 ± 49.52	0.079
	Present	196.82 ± 56.85	131.43 ± 49.63	**0.005***
Splitting	**Absent**	180.74 ± 78.54	132.81 ± 50.96	**0.007***
	Present	151.54 ± 77.85	113.75 ± 38.98	0.220
Intermittent stream	**Absent**	171.25 ± 78.54	129 ± 48.95	**0.005***
	Present	-	-	
Hesitancy	**Absent**	166.88 ± 85.89	122.50 ± 50.77	**0.022***
	Present	177.81 ± 68.19	148.50 ± 38.95	0.229
Straining	**Absent**	180.93 ± 82.35	128.79 ± 49.01	**0.004***
	Present	151.15 ± 68.62	130 ± 52.60	0.488
Terminal drippling	**Absent**	169.81 ± 75.37	132.88 ± 48.48	**0.026***
	Present	173.93 ± 87.01	110.71 ± 50.70	0.094
Incomplete emptying	**Absent**	88.13 ± 20.97	103.10 ± 26.17	0.056
	Present	226.67 ± 46.50	197.27 ± 18.89	0.053
Postmicturition drippling	**Absent**	118.13 ± 60.77	125.74 ± 46.90	0.647
	Present	206.67 ± 69.14	135.77 ± 54.31	**0.003***

P: probability. Continuous data are expressed as (mean ± SD)/ Range. *: statistically significant ($p< 0.05$).

Table (5): PVR according to prolapse, cystorectocele and stress test symptoms in the studied groups.

	Group A (Vaginal delivery)	Group B (Cesarean delivery)	P value
Prolapse			
No prolapse	186.67 ± 67.14	140.63 ± 51.65	0.251
First degree	177.31 ± 71.43	136.25 ± 49.07	0.059
Second degree	176.54 ± 85.69	111.43 ± 58.36	0.091
Third degree	153.64 ± 87.89	106 ± 20.43	0.259
Cystorectocele			
Absent	211 ± 65.33	149.76 ± 48.33	**0,025***
Present	165.57 ± 79.43	106.05 ± 39.21	**0,003***
Stress test			
Negative	139.55 ± 69.33	120.20 ± 45.86	0.328
Present	177.67 ± 88.29	147 ± 54.88	0.339
Present (mixed UI)	196.92 ± 68.63	137 ± 50.94	0.097
Complete UI	90	----------	----------

P: probability. Continuous data are expressed as (mean ± SD)/ Range, statistically significant ($p< 0.05$).