Selected Abstracts from the 28th National Urology Congress

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

SS-01 [Andrology: Infertility Treatment]

Review of hypogonadotropic hypogonadism cases followed up in our clinic in the last decade

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Objective: The aim of the present study was to evaluate patients with hypogonadotropic hypogonadism (HH) who were followed up in our clinic in the last decade. The cases were reviewed in terms of the incidence of the disease, diagnostic methods and differential diagnosis, treatment modalities, fertility rates, and treatment success.

Material and methods: Eighty-one patients were diagnosed with HH. Only patients diagnosed with idiopathic HH (IHH) were included into the study. The treatment was applied during two periods, depending on whether the patients desired to have children at that time, as testosterone replacement therapy and gonadotropin therapy.

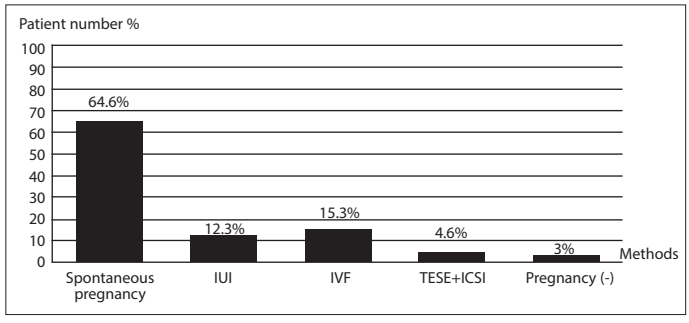

Figure 1. Methods used to achieve fertility in patients with idiopathic hypogonadotropic hypogonadism (percentage)

Results: The pregnancy rates of the spouses of the patients were as follows: spontaneous pregnancy 64.6% (n=42), intrauterine insemination 12.3% (n=8), *in vitro* fertilization 15.3% (n=10), and microscopic testicular sperm extraction+intracytoplasmic sperm injection 4.6% (n=3) (Figure 1).

Conclusion: After a long therapy, almost all IHH patients could be treated with gonadotropins (hCG+FSH) to have children. The most important issues are the dose of the drugs used and treatment duration. The most important result is that the required gonadotropin dose varies from one patient to another.

Keywords: Follicle-stimulating hormone, human chorionic gonadotropin, idiopathic hypogonadotropic hypogonadism, pregnancy, sperm, testosterone

SS-02 [Operative Techniques: Laparoscopic and Robotic Urology]

Comparison of retzius-sparing vs. standard robot-assisted radical prostatectomy for prostate cancer

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Objective: To compare the oncological and functional outcomes of Retzius-sparing robot-assisted radical prostatectomy (Rs-RARP) vs. standard RARP (RARP).

Material and methods: After the ethical committee approval, we prospectively collected data from 92 patients who underwent robotic radical prostatectomy between April 2017 and April 2018 in our clinic by a single surgeon. We compared oncological and functional outcomes of 46 patients who underwent Rs-RARP with 46 patients who underwent RARP and had at least a 1-year follow-up. Potency was assessed preoperatively and postoperatively using the Sexual Health Inventory for Men (SHIM) score. The potency of the patients was considered at least recover to the preoperative level of the SHIM score. Complications were assessed using the Clavien-Dindo classification. Patients were assessed for PSA,

Table 1. Patients' demographics and Results

	RES-RARP	RARP	p
Number of patients	46	46	1.0
Mean age	61.2	60.8	0.769
Mean BMI (kg/m^2)	26.8	27.0	0.749
Preop mean PSA levels (ng/dL)	8.28	12.34	0.113
Preop SHIM	16.3	15.6	0.531
Preop ISUP Gleason grade group			0.043
1	26	19	
2	19	16	
3	1	7	
4	0	2	
5	0	2	
EAU risk classification			0.015
Low	24	19	
Intermediate	21	17	
High	1	10	
Console time (min)	113.6	111.5	0.676
Estimated blood loss (mL)	98.2	147.5	0.0001
Length of hospital stay (days)	2.3	2.4	0.914
Complication Grade 1	3	3	0.557
Mean prostate volume, cc	46.4 (28-76)	59.2 (25-110)	0.001
RARP	3	13	0.006
RARP with extended lymph node dissection	43	33	
Postop ISUP Gleason grade group			0.037
1	4	8	
2	36	23	
3	5	8	
4	1	2	
5	0	5	
Surgical margin positivity	16/46	19/46	0.519
Pathological T stage			0.48
pT2	16	17	
pT3a	21	16	
pT3b	9	13	
Mean catheter removal (days)	12.0	15.6	0.001
1. month continence			0.001
No pads	41	26	
≥1 pad used	5	20	
1. year continence			0.459
No pads	43	41	
≥1 pad used	3	5	
Potency			0.81
+	12	11	
-	34	35	

pathology, and continence (no pad vs. ≥1 pad usage) after the 1st month following surgery. Patients were also assessed bi-monthly for PSA, continence, and the SHIM score.

Results: Patients' demographics are presented in Table 1. There were no significant differences in the mean age, mean body mass index, preop PSA, preop SHIM score, preop ISUP grade group and EAU prostate cancer risk classification when comparing the Rs-RARP group with the s-RARP group. The mean prostate volume and the mean estimated blood loss were lower, and the catheter removal time was significantly shorter in the Rs-RARP group. There were no significant differences in the mean length of hospital stay, the mean console time of the operation, mean complication rates, positive surgical margin rates, and pathological stage between the two groups. After the 1-month follow-up, 41 patients (89%) were continent (used no pads) in the Rs-RARP group, while 26 patients (56%) were continent in the RARP group, and it is statistically very significant (p=0.001) (Table 1). After the 1-year follow-up, there were no significant differences in the continence rates and potency between the two groups. Fourty-three patients (93%) were continent (used no pads) in the Rs-RARP group, and 41 patients (89%) were continent in the s-RARP group. The potency rates were 26% in the Rs-RARP vs. 23% in the RARP group, respectively. No biochemical recurrence was observed in two groups after 1-year follow-up.

Conclusion: We demonstrated that Rs-RARP is a feasible surgical technique as much as standard RARP. There is no question that Rs-RARP had better early continence rates, while no significant difference was observed after the 1st year follow-up. Retzius-sparing surgery can be preferred by people who care about early continence due to their social life. However, long-term, prospective, comparative, and randomized studies are still required.

Keywords: Prostate cancer, robot-assisted radical prostatectomy, Retzius-sparing surgery

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

SS-03 [Female Urology]

Effects of current treatment modalities on bladder histology in rats with experimental interstitial cystitis model

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Objective: Bladder pain syndrome (BPS) defined as interstitial cystitis (IC) is a syndrome that was described by the International Continence Society and is characterized by the presence of pain in the bladder region with persistent or intermittent attacks, accompanied by bladder filling or at least one of the frequencies of day and night urination. IC does not have fully defined causes, and also, there are uncertainties in the treatment. Many hypotheses have been proposed in the pathogenesis of this syndrome; recently, the most widely accepted is the increase in the bladder epithelial permeability, migration of urinary solvents to the bladder interstitium, and structural and functional urothelial changes leading to mast cell activation in patients with IC. Neurogenic inflammation and afferent hyperactivation may cause lower urinary tract symptoms, bladder pain, and decreased capacity. Based on this hypothesis, several experimental IC animal models have been identified, and treatment agents have been investigated in these models. In this study, we aimed to compare the advantages of different treatment modalities with respect to histopathology using the rat model described by Rivas et al.

Material and methods: In the study, 34 female Sprague-Dawley rats were divided into five groups. The rats in all groups were given intravesical 0.2 mL 0.4-N-hydrochloric-acid (HCL) to form chemical cystitis. This procedure was repeated every 30 days for the continuation of chronic inflammation. Subcutaneous cefazolin at a dose of 7 mg/kg was given for urinary infection prophylaxis. The first group received 4.2 mg/kg oral pentose polysulfate sodium, the second group received 20 mg/kg oral quercetin, the third group received 570 units/kg intravesical heparin, and the fourth group received 0.57 mg/kg intravesical sodium hyaluronate. Therapeutic agent was not given to the control group. After 60 days, rats

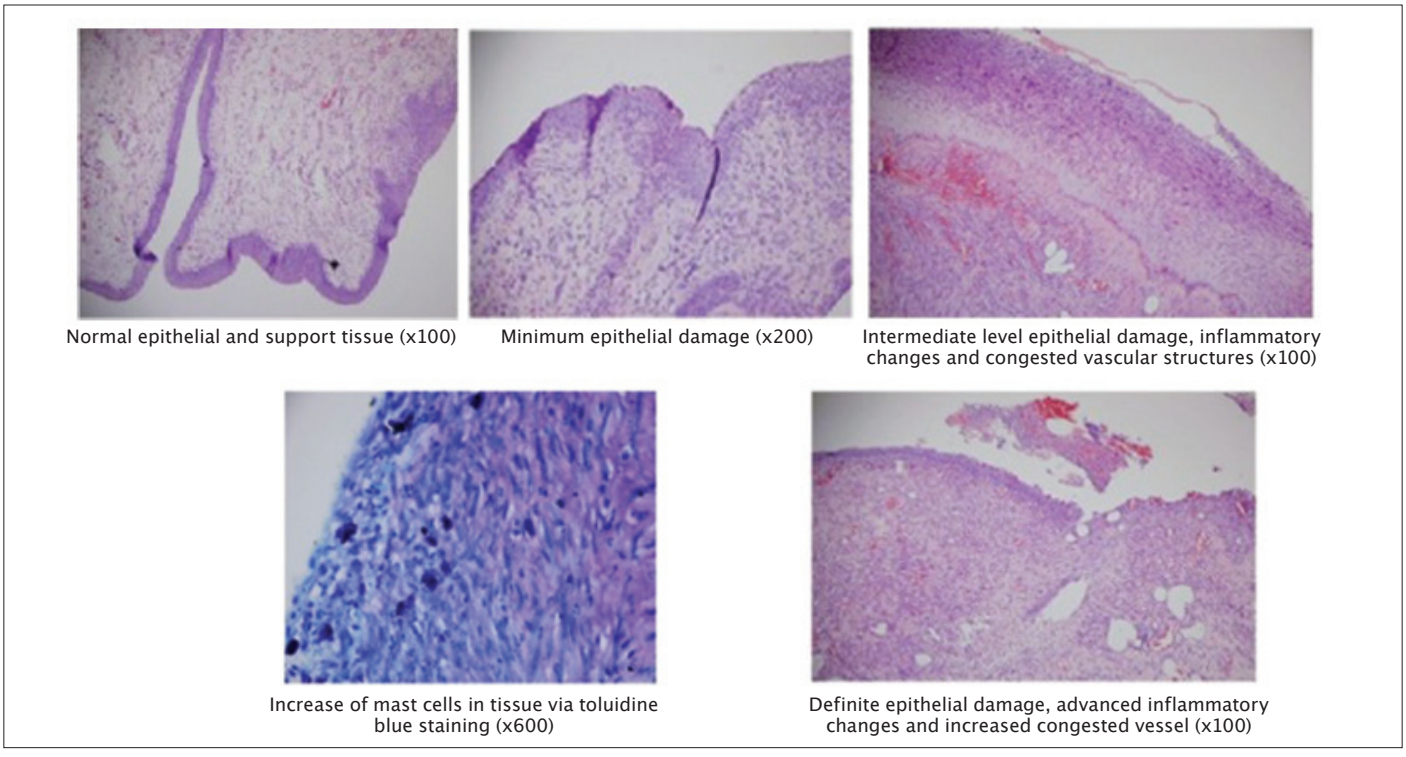

Figure 1. Evaluation of tissue damage/inflammation degree by hemotoxylin-eosin staining of tissues and mast cell numbers with toluidine blue under light microscope

Table 1. Comparison of mean mast cell count and tissue damage/inflammation degrees with control group according to the agents used in treatment

	Control n=6	O-PPS n=7	p°	O-Q n=7	p¹	IV-H n=7	p²	IV-SH n=7	p³
Mean mast cell count mean±SD (hc/10 bba)	83.0±21.26	36.2±13.57	0.013	44.4±20.16	0.049	20.6±5.94	0.001	72.4±27.8	0.920
Tissue damage/inflammation degree mean±SD	2±0	1±0	0.005	1.4±0.547	0.074	0.8±0.447	0.007	1.6±0.547	0.176

Hc: cell number; 10 bba: decade of large growth area; 0-PPS: oral pentosan polysulfate sodium; O-Q: oral quercetin; IV-H: intravesical heparin; IV-SH: intravesical sodium hyaluronate) (p°, p-value of comparison of non-drug group and oral pentosan polysulfate sodium group; p¹, p-value of comparison of non-drug group and oral quercetin group; p², p-value of intravesical heparin group versus non-drug group; p³, intravesical sodium hyaluronate p-value)

in all groups were sacrificed for histopathological examination. Under light microscopy, tissues were evaluated for the hematoxylin-eosin stain with the tissue damage/inflammatory changes and toluidine-blue stain with mast cell count.

Results: The tissue damage/inflammatory changes were minimal in the heparin group, and the number of mast cells was lower than in the other groups. In the pentosan polysulfate sodium group, tissue damage/inflammatory changes and mast cell counts were higher, but lower than in the heparin group. In the sodium hyaluronate and quercetin group, tissue damage/inflammatory changes and the number of mast cells were found to be lower, but higher than the control group. When the groups were compared in terms of tissue damage/inflammatory changes, a statistically significant difference was found between heparin-receiving and sodium-hyaluronate-receiving groups, and no significant difference between the other drugs. There was a statistically significant difference between the groups receiving pentosan polysulfate sodium, quercetin, and heparin, respectively, and the non-drug group (p=0.013, p=0.049, p=0.001, respectively). In addition, a statistically significant difference was detected between the group receiving heparin and the group receiving sodium hyaluronate in terms of mast cell count (p=0.003).

Conclusion: We suggest that oral agents should be used as the first-line treatment in patients with BPS/IC, and especially pentosan polysulfate sodium should be given attention to the side-effect profile, but heparin should be administered to patients in need of intravesical therapy for easy accessibility. There is a need for more controlled studies on BPS/IC in large populations.

Keywords: Painful bladder syndrome, rat model, experimental interstitial cystitis

SS-04 [Urinary Stone Disease-Treatment (shock wave lithotripsy, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Efficacy of silodosin or mirabegron in medical expulsive therapy for ureteral stones: A prospective randomized controlled study

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Objective: To evaluate the efficacy of silodosin or mirabegron as a medical expulsive therapy for ureteric stones in adults.

Material and methods: This is a prospective randomized multicentric study. Patients who have a ureter stone between 4 and 10 mm in size were assessed prospectively in three single centers. Exclusion criteria were a solitary kidney, bilateral ureter stone, a stone >10 mm, urinary tract infection, acute azotemia, using another alpha blocker or anticholinergic for lower urinary tract symptoms, residual stone after any procedure (shock wave lithotripsy, ureterolithotripsy, ureterolithotomy, etc.), patients with uncontrolled hypertension or hepatic dysfunction, pregnancy, and childhood. Stones that were seen easily on the kidney-ureter-bladder (KUB) scout film or ultrasound (distal ureter stones) were included into the study. Patients were divided into three groups with equal randomization. Group 1 was the control group, Group 2 took silodosin 8 mg, and Group 3 mirabegron 50 mg once a day. Patients were followed weekly for 4 weeks by ultrasonography and/or KUB, if patients could not see the stone. In patients who could not experience spontaneous passage of the stone interventional, treatments were started.

Results: A total of 169 patients were included into the final analysis after 11 patients experienced adverse events or were lost to follow-up. Three groups were similar in terms of the mean age, gender, side, stone size (<6 mm), and localization. A spontaneous expulsion rate was similar between the groups. The stone expulsion interval was shorter in silodosin (7.7±4.5 days) than the control group (12.3±7.3 days; p=0.003). The stone expulsion interval was similar in proximal or middle localization (p=0.146) or stone size bigger or equal to 6 mm (p=0.124). In distal localization, the

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Table 1. Patient details

	Control	Silodosin	Mirabegron	p
Number of patients (n)	59	54	56	
Mean age (years)±SD	39.1±14.6	40±15	43±13.3	0.319
Gender (male/female)	45/14	40/14	48/8	0.281
Side (right/left)	38/21	29/25	30/26	0.402
Stone size (<6 mm/≥6 mm)	19/40	12/42	22/34	0.153
Localization (proximal or middle/ distal)	23/36	19/35	27/29	0.145
Stone expulsion rate				
All	31/59 (52.5%)	35/54 (64.8%)	31/56 (55.4%)	0.391
Proximal or middle	12/23 (52.2%)	11/19 (58%)	14/27 (51.8%)	0.908
Distal	19/36 (52.8%)	24/35 (68.6%)	17/29 (58.6%)	0.391
Stone size ≥6 mm	20/40 (50%)	27/42 (64.3%)	15/34 (44.1%)	0.186
Stone size <6 mm	11/19 (58%)	8/12 (66.7%)	16/22 (72.8%)	0.606
Stone expulsion interval (days)				
All	12.3±7.3	7.7±4.5†	9.8±4.7	0.003*
Proximal or middle	13±4.5	9.1±4.3	10.6±5.2	0.146
Distal	12±8.7	7.1±4.5†	9.2±4.3	0.034*
Stone size ≥6 mm	12.4±8.9	8.5±4.5	9.6±4.4	0.124
Stone size <6 mm	12.2±2.8	5.8±4†	10±5	0.004*
Analgesic necessary (doses)				
All	3.27±2.1	2.73±2.1	2.23±1.8†	0.017*
Proximal or middle	2.75±1.8	2.77±1.8	2.67±1.6	0.974
Distal	3.6±2.3	2.7±2.3	1.8±1.9†	0.004*
Stone size ≥6 mm	3.2±1.8	3.1±2.2	1.9±1.8†	0.017*
Stone size <6 mm	3.6±2.8	1.4±1.3†	2.7±1.7	0.028*

stone expulsion interval was shorter in the silodosin (7.1±4.5 days) than in the control group (12±8.7; p=0.034). In groups with the stone size <6 mm, the stone expulsion interval was shorter in the silodosin (5.8±4) than in the control group (12.2±2.8; p=0.004). When the stone was <6 mm and with distal localization, the stone expulsion interval was shorter in the silodosin (4.6±2.7) than the control group (11.8±8.4; p=0.031). Mirabegron had no effect on the stone expulsion interval in any analysis. Analgesics were less necessary in the mirabegron (2.23±1.8) than in the control group (3.27±2.1) in all patients (p=0.017). In a stone ≥6 mm and distal localization, analgesics were less neccessary in the mirabegron (1.8±1.9; 1.9±1.8) than in the control group (3.6±2.3; 3.2±1.8), respectively (p=0.004; p=0.017). In a stone <6 mm, analgesics were less necessary in the silodosin (1.4±1.3) than the control group (3.6±2.8; p=0.028). In a stone ≥6 mm and distal localization, analgesics were less necessary in the mirabegron (1.1±0.6) than in the control group (3.43±2.7; p=0.002). In a stone <6 mm and distal localization, analgesics were less necessary in the silodosin (1.36±0.8) than in the control group (4.1±2.5; p=0.037).

Conclusion: We did not find a statistically significance between the groups in terms of the stone expulsion rate. Silodosin improves the stone expulsion interval, especially in distal localization or stones <6 mm in size. Mirabegron has no effect on the stone expulsion interval. Furthermore, silodosin decreases analgesics necessity in stones <6 mm, but it might be interested short expulsion interval. Mirabegron decreases the necessity of analgesics in distal localization or stones ≥6 mm in size.

Keywords: Ureter stone, spontane expulsion, silodosin, mirabegron

SS-05 [Uroradiology]

Does the presence of chronic prostatitis affect multiparametric magnetic resonance imaging?

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Table 1. Patient characteristics

	Min-Max	Median	Mean±SD n (%)
Age (years)	46-78	62.6	61.4±6
PSA (ng/mL)	1.8-43	7.6	9.5±6
PSA density	4.8-123.3	17.7	23.0±17.2
Prostate volume (mL)			
≤35			83 (28.14%)
35-65			173 (58.64%)
≥65			39 (13.22%)
Biopsy Gleason Score (%)			
2-6			224 (75.93%)
3+4			52 (17.63%)
4+3			15 (5.08%)
8			3 (1.02%)
9-10			1 (0.34%)
No. of positive cores	1-12	3	3.73±2.1
Percentes of positive cores	6-100	30	35.9±21.5
MRI PI-RADS category			
≤2			53 (17.97%)
3			50 (16.95%)
4			179 (60.68%)
5			13 (4.41%)
Prostatectomy Gleason Score (%)			
3+3			79 (26.78%)
3+4			131 (44.41%)
4+3			47 (15.93%)
8			21 (7.12%)
9-10			17 (5.76%)

PSA: prostate-spesific antigen; MRI: magnetic resonance imaging

Objective: To compare biopsy results in patients with chronic prostatitis plus prostate cancer versus patients with pure prostate cancer based on multiparametric magnetic resonance imaging (mpMRI) findings.

Material and methods: Between April 2016 and April 2019, a total of 295 patients who underwent transrectal ultrasound-guided biopsy (TRUS-Bx) and were diagnosed with prostate cancer were included in the study. Demographic data, mpMRI findings, and histopathological findings were evaluated retrospectively. The normal distribution of the data was evaluated using the Shapiro-Wilk test. The independent T-test was used to compare the independent groups with normal distribution, and the Mann-Whitney U test was used to compare the groups without normal distribution. The chi-squared ($\chi 2$) test was used to compare qualitative independent variables between groups.

Results: The demographic data of the patients are summarized in Table 1. According to the biopsy results, there were 148 patients (Group 1) in the prostate adenocarcinoma group with chronic prostatitis and 147 patients (Group 2) in the group with prostate adenocarcinoma alone. There was no significant difference between the groups in terms of PSA values, PSA density, prostate volume, laboratory values, mpMRI, and histopathological evaluation findings (Table 2). When the groups were compared in terms of the Gleason scores according to mpMRI findings and PI-RADS scores, both groups were found to be similar (Table 3).

Conclusion: The association of prostate adenocarcinoma with chronic prostatitis does not affect mpMRI findings. Further studies may reveal differences with new versions of PI-RADS, and our findings should be confirmed by histopathological results of radical prostatectomy specimens.

Table 2. Comparison of biopsy results with chronic prostatitis plus prostate cancer patients versus pure prostate cancer patients

	Biopsy Results						
	CP+PCa n=148			Pure PCa n=147			
	Min-Max	Median	Mean±SD/n (%)	Min-Max	Median	Mean±SD/n (%)	p*
Age (years)	46-75	61	61.0±6.1	48-78	62	61.8±6.0	0.440
PSA (ng/mL)	1.48-43	8	10.0±6.8	3.8-27.0	7.2	9.0±5.2	0.816
PSA density	4.8-123.3	18.1	24.5±20.1	4.8-67.5	16.9	21.5±13.6	0.453
Prostate volume (mL)	24-110	45	46.5±17.4	14-115	40	46.1±17.7	0.152
Biopsy Gleason Score (%)							0.054[c]
2-6			106 (71.62%)			118 (80.27%)	
3+4			29 (19.59%)			23 (15.65%)	
4+3			12 (8.11%)			3 (2.04%)	
>8			1 (0.68%)			3 (2.04%)	
No. of positive cores	1-9	3	3.7±2.2	1-12	3	3.7±2.0	0.771
Percentes of positive cores	10-90	30	37.2±22.7	6-100	30	34.6±20.3	0.436
MRI PI-RADS category							0.832[p]
≤2			29 (19.59%)			24 (16.33%)	
3			23 (15.54%)			27 (18.37%)	
>4			96 (64.86%)			96 (65.31%)	
MRI SVI			15 (10.14%)			11 (7.48%)	0.539[y]
MRI ECE			32 (21.62%)			35 (23.81%)	0.679[p]

CP: chronic prostatitis; PCa: prostate cancer; PSA: prostate-spesific antigen; MRI: magnetic rosnance imaging; SVI: seminal vesicle invasion; EPE: extraprostatic extension. *Mann-Whitney U test. [p]Pearson Chi-square test, [y]Yates' Chi-square test, [c]Chi-square Exact test

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Table 3. Gleason score distribution of all prostate cancer lesions according to PI-RADS score

	Biopsy results		
	CP+PCa	pure PCa	p
MRI PI-RADS category			
2			0.775[e]
3+3	27 (18.24%)	22 (14.97%)	
3+4	2 (1.35%)	1 (0.68%)	
4+3	0	0	
≥8	0	0	
3			0.202[e]
3+3	20 (13.51%)	17 (11.56%)	
3+4	3 (2.03%)	7 (4.76%)	
4+3	0	1 (0.68%)	
≥8	0	1 (0.68%)	
4			0.001[e]
3+3	59 (39.86%)	79 (53.74%)	
3+4	24 (16.22%)	15 (10.2%)	
4+3	12 (8.11%)	1 (0.68%)	
≥8	1 (0.68%)	1 (0.68%)	
MRI SVI			0.169[e]
SVI+	15 (10.14%)	9 (6.12%)	
SVI-	0	2 (1.36%)	
MRI EPE			0.883[y]
EPE+	27 (18.24%)	28 (19.05%)	
EPE-	5 (3.38%)	7 (4.76%)	

CP: chronic prostatitis; PCa: prostate cancer; MRI: magnetic resonance imaging; SVI: seminal vesicle invasion; EPE: extraprostatic extension. [y]Yates' Chi-square test, [e]Chi-square Exact test

Keywords: Prostate cancer, multiparametric magnetic resonance imaging, chronic prostatitis, gleason score

SS-06 [Andrology Erectile Dysfunction (Male, Female) Diagnosis]

Relationship between the anogenital distance and lifelong premature ejaculation

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Objective: To investigate the relationship between the anogenital distance showing intrauterine androgenic exposure and lifelong premature ejaculation.

Material and methods: The study included 82 participants, 41 with lifelong premature ejaculation (Group 1) and 41 without any ejaculatory complaints (Group 2). The Premature Ejaculation Diagnostic Tool (PEDT) and stop-watch intravaginal ejaculatory latency times were recorded in all participants to evaluate the ejaculatory function. Two variants of AGD were measured: AGDAS (from anus to the posterior base of the scrotum) and AGDAP (from anus to the cephalad insertion of the penis). We compared differences between groups and correlations between the AGD variants and patient characteristics.

Results: The groups were similar in terms of age, body mass index, and total testosterone levels. The mean AGDAS scores were 60.58±1.59 vs. 55.43±1.6 (p=0.03), and the mean AGDAP scores were 132.41±4.11 vs. 130.43±3.4 (p=0.71) in Groups 1 and 2, respectively. A significant cor-

Table 1. Comprasion of the groups in terms of anthropometric and sexual characteristics

Characteristics	Lifelong PE (n=41) Mean±SD or median (range)	Control (n=41) Mean±SD or median (range)	p
Age (year)	38 (24-58)	35 (18-53)	0.84*
Height (cm)	175.34±1.23	174.95±1.51	0.81**
Weight (kg)	78 (61-99)	81 (63-95)	0.42*
BMI (kg/m^2)	25.90±0.60	26.41±0.53	0.53**
PEDT score	14 (11-20)	4 (0-10)	0.000*
IELTs (seconds)	45 (14-60)	190 (130-561)	0.000*
TT (ng/mL)	3.7 (1.2-8.2)	3.3 (1.55-8.3)	0.30*
AGDAS	60.58±1.59	55.43±1.6	0.03**
AGDAS index	2.38±0.08	2.11±0.05	0.007**
AGDAP	132.41±4.11	130.43±3.4	0.71**
AGDAP index	4.92 (3.24-8.54)	4.94 (2.83-7.17)	0.77*

PE: premature ejaculation; SD: standard deviation; IELT: intravaginal ejaculatory latency time; PEDT: Premature Ejaculation Diagnostic Tool; BMI: body mass index; TT: total testosterone; AGDAS: anogenital distance (from anus to the posterior base of the scrotum); AGDAP: anogenital distance (from anus to the cephalad insertion of the penis); *Student's t-test. **Mann-Whitney U test.

relation was observed between the AGDAS and PEDT scores (r=0.298, p=0.007). There were no statistically significant differences between the AGDAS scores and intravaginal ejaculatory latency times and between the AGDAP scores and PEDT scores or intravaginal ejaculatory latency times.

Conclusion: Although it should be supported by prospective studies involving a higher number of patients, these results suggest that a longer AGD is associated with a higher possibility of lifelong premature ejaculation.

Keywords: Lifelong premature ejaculation, anogenital distance, intrauterine androgen exposure

SS-07 [Urothelial Cancers-Diagnosis]

Relationship between immunohistochemical staining extent of CD47 and histopathologic features of bladder tumor

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Objective: CD47 is an important diagnostic and prognostic marker in many cancer types. In previous studies, it has been shown that CD47+ tumors send the "Do not eat me" message to the immune system, which leads to tumors escaping the immune system and their progression. However, the relationship between CD47 and the bladder tumor stage has not been shown in previous studies. Thus, to the best of our knowledge, this is the first study investigating the association of CD47 with the stage of bladder tumor.

Material and methods: Pathological specimens of 175 patients were included in the study. The CD47 staining assessment was performed in the following categories: none, focal, moderate, and diffuse. The statistics of the study were tested using the t-test and analysis of variance. To perform the analyzes, the SPSS 22.0 package program was used, and a p-value <0.05 was accepted as the statistical significance limit.

Results: We demonstrated a much lower CD47 staining extent in Ta tumor pathology compared to T1 and T1+T2+T3+T4 tumor pathology (p=0.034 and p=0.016, respectively). We also determined that the average value of the CD47 staining extent with Cıs+(Carcinoma *in situ*) was significantly higher compared to Cıs-among non-muscle invasive bladder cancer (NMIBC) (p=0.0248). A total of 156 patients with the TCC tumor pathology and CD47 staining patterns of 13 patients with pathology cystitis and inflammation were investigated; there was a statistically significant difference in favor of tumor tissues (p<0.001). However, no significant differences in the CD47 staining pattern were observed in the following study groups: high- vs. low-grade tumors in NMIBC; MIBC (muscle invasive bladder cancer) (T2-T4) vs. NMIBC; lymph node involvement (N1-N3) vs. non-lymph node involvement (N0) in MIBC (T2-T4).

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Conclusion: Our study demonstrated that CD47 might play a critical role in the progression of Ta to the T1 stage. Furthermore, we showed that CD47 is highly expressed in Cıs+NMIBC compared to Cıs–NMIBC. Thus, differentiating stages with the help of this new potential marker may help clinicians to treat bladder tumors better. Future studies to determine the role of CD47 on pathophysiology, diagnosis, and prognosis of bladder tumor are warranted. Although we obtained promising preliminary findings to evaluate CD47 as a prognostic marker in bladder cancer, primarily prospective, clinical progressions of patients are included in the study, large-scale studies are needed.

Keywords: Bladder tumor, CD47, biomarker, stage

SS-08 [Pediatric Urology]

Laparoscopy versus robotic-assisted pyeloplasty in children: Preliminary results of a pilot prospective randomized controlled trial

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Objective: The aim of this randomized controlled trial (RCT) is to compare the outcomes of conventional laparoscopic pyeloplasty (LP) versus robotic-assisted laparoscopic pyeloplasty (RALP) in the treatment of ureteropelvic junction obstruction (UPJO) in children.

Material and methods: A total of 53 patients with UPJO were randomized as LP (Group 1, n=27) and RALP (Group 2, n=26). Redo cases and patients with anatomical abnormalities were excluded. Urinary ultrasound was performed at postoperative 3, 6, and 12 months, whereas, diuretic renal scintigraphy was performed at 1 year. Failure was defined as progressive hydronephrosis on ultrasound, decline in renal function, or symptom relapse. All parameters were statistically compared.

Table 1. Perioperative and postoperative outcomes

	Total (n=53)	Laparoscopic pyeloplasty (n=27)	Robot-assisted laparoscopic pyeloplasty (n=26)	p
Operative time (min) (mean±SD)	122.55±38.48	139.26±43.21	105.19±22.87	0.001
Console time (min) (mean±SD)	NA	NA	81.15±16.51	
Crossing vessel; n (%)				
No	40 (75.5)	20 (74.1)	20 (76.9)	0.810
Yes	13 (24.5)	7 (25.9)	6 (23.1)	
Stent insertion technique; n (%)				
Antegrade	52 (98.1)	26 (96.3)	26 (100)	1.000
transanastomotic-pyeloureteral stent	1 (1.9)	1 (3.7)	0 (0)	
No, trocar (mean±SD)	3.40±0.49	3.00±0	3.81±0.40	0.001
Perioperative complication				
No	52 (98.1)	27 (100)	25 (96.2)	0.491
Yes	1 (1.9)	0 (0)	1 (3.8)	
Hospital stay (h) (mean±SD)	29.08±11.27	32.00±14.88	28.00±12.36	0.246
Analgesic requirement (mg) (mean±SD)	1200.00±532.92	1288.89±536.75	1111.11±529.03	0.278
Follow-up (month) (mean±SD)	12.43±5.34	14.26±4.36	10.50±4.68	0.001
Postoperative complication; n (%)				
No	49 (92.4)	25 (92.5)	24 (92.3)	1.000
Yes	4 (7.6)	2 (7.5)	2 (7.7)	
Success; n (%)				
Yes	51 (96.2)	25 (92.6)	26 (100)	0.491
No	2 (3.8)	2 (7.4)	0 (0)	
Cost analysis (TL) (mean±SD)	5032.71±3433.22	2347.60±870.50	8868.57±1054.95	0.001

Results: The mean age of the patients was 55.53±57.25 months. There were no statistically significant differences between the groups in terms of patient gender, body mass index, laterality, preoperative renal function, renal pelvis anteroposterior diameter, and presence of crossing vessel. The mean total operative time in the LP group was longer than RALP (139 min vs. 105 min, respectively, p=0.001). The hospital stay was similar between the two groups. After a mean follow-up of 12.43±5.34 months, the complication and success rates were comparable. Only two patients required redo pyeloplasty in the LP group. The mean total cost of the RALP procedure was approximately four times higher than LP.

Conclusion: To the best of our knowledge, this is the first RCT comparing LP and RALP in pediatric population. Both LP and RALP are safe and effective in children with comparable success and complication rates. The operative time was longer for LP, whereas, total cost was higher for RALP.

Keywords: Children, laparoscopy, pyeloplasty, robotics, robotic pyeloplasty

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SS-09 [Experimental Urology: Andrology]

Propagation of spermatogonial stem cells from infant boys

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Objective: Gonadotoxic treatment of malignant diseases as well as non-malignant diseases such as cryptorchidism in young boys may result in infertility and failure to father children later in life. As a fertility-preserving strategy, several health centers collect testicular biopsies to cryopreserve spermatogonial stem cells (SSCs) worldwide. One of the most promising therapeutic strategies is to transplant SSCs back into the seminiferous tubules to initiate endogenous spermatogenesis. However, to obtain sufficient numbers of SSC to warrant transplantation, *in vitro* propagation of cells is needed together with proper validation of their stem cell identity.

Material and methods: Minute amounts of testicular biopsies (5-10 mg) were processed by mechanical and enzymatic digestion. SSCs were enriched by a differential plating method in the StemPro-34 medium supplemented with several growth factors. SSC-like cell clusters (SSCLCs) were passaged five times. SSCLCs were identified by immunohistochemical and immunofluorescence staining, using protein expression patterns in testis biopsies as reference. A quantitative polymerase chain reaction analysis of SSC markers LIN-28 homolog A (LIN28A), G antigen 1 (GAGE1), promyelocytic leukemia zinc finger protein (PLZF), integrin alpha 6 (ITGA6), ubiquitin carboxy-terminal hydrolase L1 (UCHL1), and integrin beta 1 (ITGB1) were also used to validate the SSC-like cell identity.

Results: The proliferation of SSCs was achieved as the formation of SSCLCs was consistently observed during the five passages. The presence of SSCs in SSCLCs was confirmed by positive immunostaining of LIN28, UCHL1, and PLZF and quantitative polymerase chain reaction for LIN28A, UCHL1, PLZF, ITGA6, and ITGB1, respectively (Figure 1).

Conclusion: This study demonstrated that SSCs from infant boys potentially possess the capacity for *in vitro* proliferation and advance a fertility preservation strategy for young boys, who adversely may lose their fertility.

Keywords: Cryptorchidism, fertility cryopreservation, in vitro propagation, male infertility, spermatogonial stem cell

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

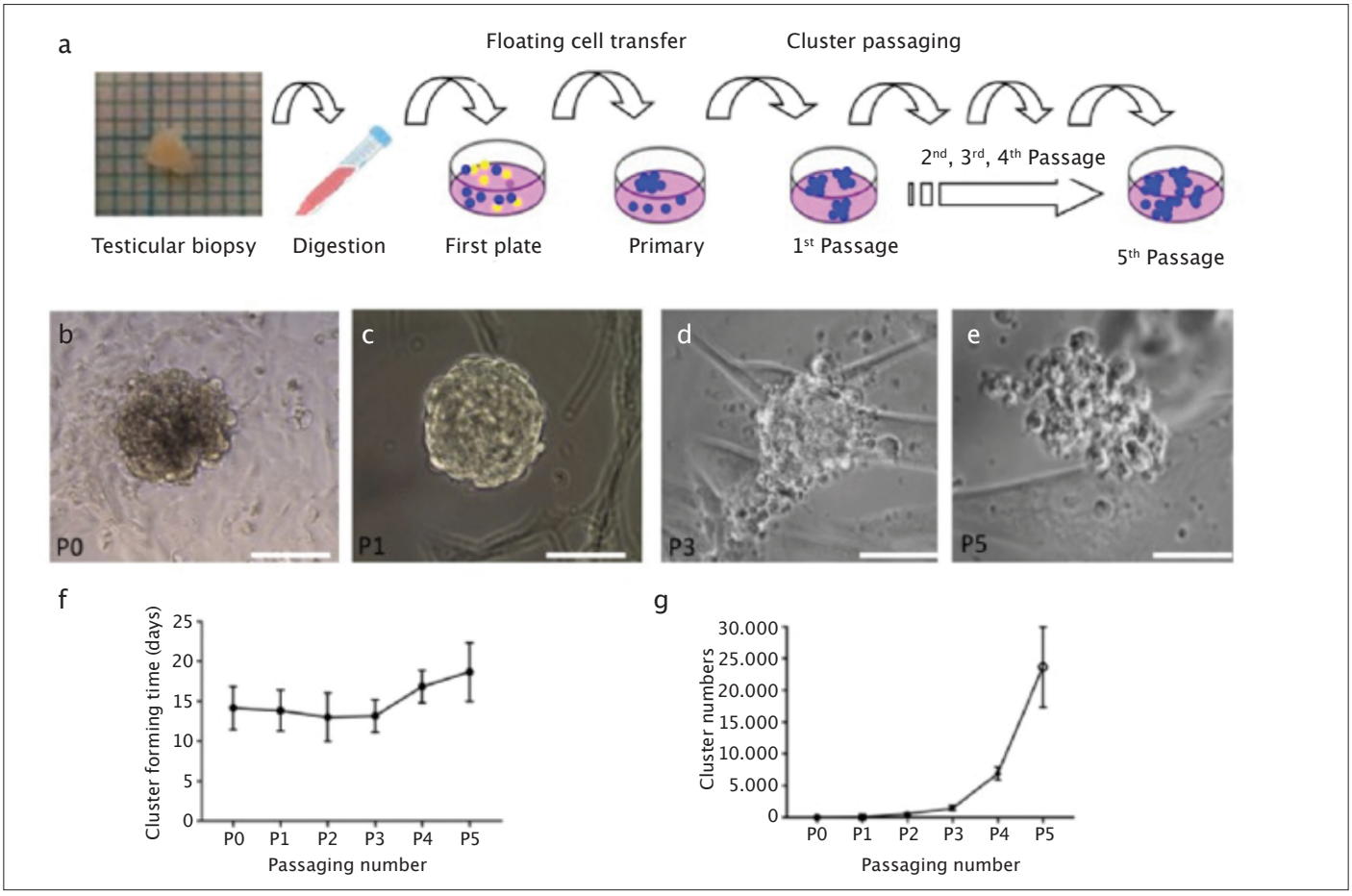

Figure 1. a-g. Derivation and propagation of human spermatogonial stem-cell-like cell clusters (SSCLCs) from infant boys. (a) Methodology of deriving SSCLCs from testicular biopsies. One square is 1 mm². (b) SSCLCs forming from primary cell culture. (c) First passage. (d) Third passage. (e) Fifth passage. Scale bar 100 μm. (f) Clusters forming time after passaging. (g) Estimated SSCLC numbers; error bars represent standard deviation

SS-10 [Upper Urinary Tract Pathologies: Transplantation]

Dual kidney transplantation using extended criteria donors' kidneys

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Objective: Recently, the number of elderly donors aged >60 has been increasing. However, donors older than 60, a history of diabetes or hypertension, and proteinuria are accepted as extended criteria donors (ECD). The ECD kidneys, which are associated with a reduced graft survival rate, are mostly discarded. Dual kidney transplantation (DKT) is a way to increase the use of ECD kidneys, which have to be refused according to the Kidney Donor Profile Index (KDPI) and Kidney Donor Risk Index (KDRI). DKT is performed with satisfactory results because of a double nephronic mass. However, DKT is underused and considered to be useless by transplant centers where it is not performed. The aim of this study is to indicate the surgical complication of the DKT, which is not superior compared to the single-kidney transplantation (SKT).

Material and methods: We analyzed early surgical complications and delayed graft function (DGF) of 13 DKT and 14 SKT with ECD kidneys in the last 3 years.

Results: We performed 13 DKT and 14 SKT with ECD kidneys. In the DKT series, 7 patients were male, and 6 patients were female. The average ages of DKT and SKT recipients were 53.6 and 59.6, respectively. There were no vascular complications, neither arterial nor venous, in the vascular suture line in the two groups. A double-J stent was used in all patients during the ureterovesical anastomosis and taken 3 weeks after the anastomosis. There were no ureteral complications such as urine leak or anastomotic stenosis in both the groups. One wound infection was observed in the SKT group. Seven DGF were seen in the DKT group of 13 patients, whereas 9 DGF were in the SKT group of 14 patients.

Conclusion: Our observations suggest that DKT is not associated with a higher rate of surgical complications compared to the SKT. In the shortage of the organ donation, an ECD kidney can be used safely as a DKT.

Keywords: Kidney transplantation, dual kidney transplantation, KDPI, KDRI

SS-11 [Urinary Infections and Inflammations]

Evaluation of therapeutic efficacy of the herbal mixture preparation named cystolyberin on cystitis

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Objective: The aim of this study is to evaluate the effects of herbal agent Cystolyberin on the treatment of bacterial cystitis in rats.

Material and methods: Twenty-eight male Sprague-Dawley rats were divided into four groups. Group 1 was the sham group (rats treated with saline injected into the bladder, received only drinking water for 7 days); Group 2 was the control group (rats operated and injected with *Escherichia coli* (*E.coli*) J96 strain in the bladder, received only drinking water for 7 days); Group 3 received the short-term treatment (rats operated and injected with *E.coli* J96 strain in the bladder, received the herbal agent added to the drinking water for 7 days); and Group 4 was the long-term treatment (rats operated on and injected with *E.coli* J96 strain in the bladder, and received the herbal agent added to drinking water for 14 days). At the end of the predefined treatment periods, rats were sacrificed, and urine samples collected from the bladder for urine culture and bladders were collected for histopathological evaluation. Urine culture results and histopathological findings were compared between the groups.

Results: Urine cultures were positive in 0%, 100%, 42.86%, and 0% for implanted *E. coli* strains in Group 1, Group 2, Group 3, and Group 4, respectively (p=0.001). There was a statistically significant difference between the distribution of inflammation in Group 2 and Group 4 (p=0.004). No significant difference was found between edema, vascular congestion, epithelial alteration, urothelial epithelial lining, the presence of lymphocytes in the epithelium, and the thickness of lamina propria (micrometers) (p=0.208, p=0.150, p=0.272, p=0.110, p=0.252, and p>0.05, respectively).

Conclusion: Treatment with Cystolyberin added to drinking water for a long period (14 days) resulted in complete clearance of *E. coli* from urine, while a shorter administration of this treatment revealed a partial benefit. Further clinical trials are needed to support our results.

Keywords: Bacterial cystitis, herbal agent, antibiotics

SS-13 [Experimental Urology: Other]

Protective effects of dantrolene against spinal cord injury induced early oxidative damage in rabbit bladder

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Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Objective: To investigate the effects of early dantrolene treatment of changes in bladder characteristics after aspinal cord injury (SCI).

Material and Methods: We studied the possible protective effects of dantrolene on SCI-induced oxidative damage in bladder tissues of rabbit. We devided 38 rabbits into 5 groups: the control group (1), spinal cord injury (SCI) (2), SCI+dantrolene 0 hour (3), SCI+dantrolene 1st hour (4), and SCI+dantrolene 4th hour (5). After a 24-hour euthanasia, the urinary bladder was removed for gross, histological, and biochemical evaluation. Bladder tissues were investigated by light microscopy. Furthermore, blood and tissue malondialdehyde (MDA), glutathione (GSH), and nitric oxide (NO) were also determined.

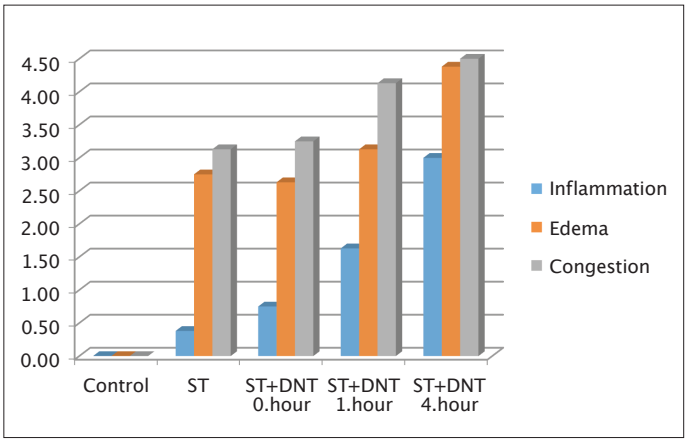

Figure 1. Growth of multi species *Candida* on CHROMagar *Candida* medium
ST: sipinal trauma; DNT: dantrolene

Results: A significant increase in congestion and edema was observed in the early period spinal trauma (SCI) group compared to the control group. In Groups 3 and 4, dantrolene was more effective in preventing edema and inflammation, whereas in Groups 3, 4, and 5, dantrolene did not reduce congestion. The MDA levels and NO levels increased, and the GSH levels were decreased in the SCI group compared to controls. Dantrolene was not effective in all three treatment groups to normalize decreased GSH levels after trauma. It was seen that dantrolene was ineffective in all three treatment groups to normalize the decreased GSH level after trauma. Increased levels of MDA after spinal trauma were found to be the lowest in Group 5 given dantrolene at the 4th hour.

Conclusion: It can be concluded that dantrolene applied in the early period is effective in reducing the inflammation and edema in the bladder and is ineffective in decreasing the post-traumatic GSH levels to normal. As a result, dantrolene may be helpful in correcting the impaired bladder morphology.

Keywords: Spinal cord injury, dantrolene, anti-inflammatory, antioxidant

SS-15 [Urinary Infections and Inflammations]

Effect of a Herbal Medication (Tutukon Neo) on the eradication of cystitis in the rat model

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Objective: To outline the efficacy of a herbal agent in the treatment and prevention of bacterial cystitis in a rat model in a dose-dependent manner.

Material and methods: A total of 51 male Sprague-Dawley rats were divided into 9 different groups. Group K constituted the control group (operated on and normal saline injected into the bladder, received only drinking water for 7 days); Group H constituted the no-treatment group (operated on, *Escherihia coli* [*E. coli*] J96 strain injected into the bladder, received only drinking water for 7 days; Groups A, B, C, D, E, F, and G constituted the treatment groups (operated on, *E.coli* J96 strain injected into the bladder, received the herbal agent added into drinking water for 7 days with increasing dosages from A to G, respectively) At the end of the predefined treatment periods of duration, the rats were sacrificed, and the urine samples were collected from the bladder for urine analysis and urine culture. In addition, the bladders of the animals were harvested for histopathological evaluation. Urine analysis/culture results and histopathological findings were comparatively evaluated between the groups.

Results: A microscopic urine analysis findings in all groups clearly showed that the application of the herbal agent "Tutukon Neo" had a significant preventive effect on the formation of urinary infection (p=0.036). The urine culture test results were negative for all rats of the treatment groups F and G. According to the histopathological evaluation, there was no statistically significant difference between the groups regarding the parameters of vascular dilatation, edema formation, level of inflammation, uroepithelial thickness, or number of cell layers in the bladder uroepithelium.

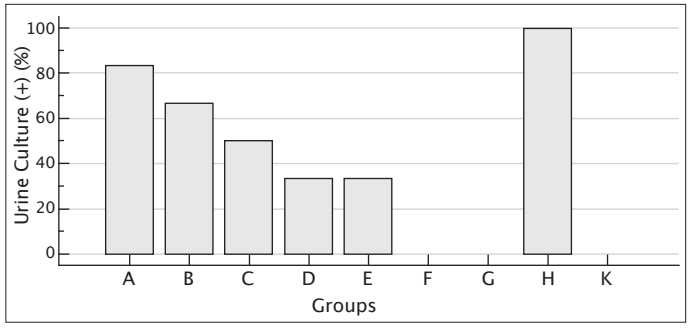

Figure 1. Urine culture positivity rates

Conclusion: As an herbal agent, "Tutukon Neo" can constitute an alternative treatment option in the eradication of urinary tract infection with proper dosages. The diuretic, antimicrobial, anti-inflammatory, and antioxidant effects of this herbal agent (Tutukon Neo) could be responsible for the potent eradication of urinary tract infections in the animal model.

Keywords: Acute cystitis, herbal agent, antimicrobial, anti-inflammatory

SS-17 [Other]

Urology in the forensic medicine records in the Ottoman Qadi Registry Books

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Objective: The efforts and practices aimed at solving the crime and finding the culprit were carried out in the Ottoman Empire as in almost every society. Until the second half of the 19th century, when forensic medicine was institutionalized, the records belonging to these applications were held by the institution of "Qadi" in court registry books. In this study, on the basis of these records, which are also named *Shariah Court Records* (shortly, court records), we aimed to reveal the Ottoman period forensic science procedures and the place of urology in these procedures.

Material and methods: A literature search was conducted using certain keywords from the Ottoman medical sources. The Ottoman archive documents and the relevant literature were examined in terms of forensic practices and urology, especially in the translated *Shariah Court Records* belonging to several cities.

Results: The signing of Ottoman consent documents (similar to informed consent) prior to the medical interventions, the judgment of physicians for fraud and mistakes from time to time, the consultancy of physicians regarding injuries, infectious diseases, and on-site exploration of deaths were identified as the main forensic medicine applications that were applied by the institution of the "Qadi." Especially a number of data about urologic diseases and forensic urology of the period in the consent documents were uncovered (Figure 1a-c).

Conclusion: Court records have provided a variety of information through consent documents about the forensic science procedures, urogenital diseases and urologic forensic cases of the period. The informed consent, which was introduced in Europe by the 19th century, was in the use in the Ottoman Empire since the 15th century under the name of the consent document, showing the reached level by the Ottomans in the medical ethics in terms of physician and patient rights.

Keywords: Urology, court records, informed consent, Ottoman forensic medicine, history of urology

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

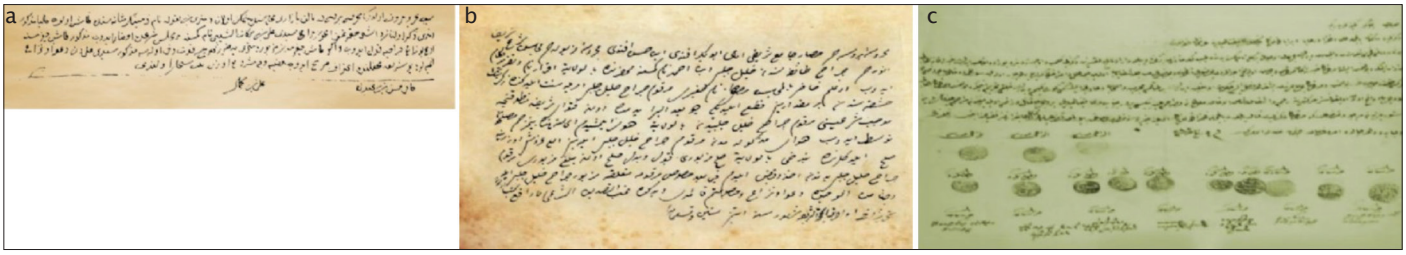

Figure 1. a-c. The Ottoman consent document related to bladder stone surgery, Bursa Shariah records, Bursa (a). Document on the case where the glans penis was injured in the circumcision process, Bursa Shariah records, Bursa (b). The petition of Muslim and non-Muslim local community, who complained about the physician Perikli who did not have a diploma, Denizli Shariah records, Denizli (c)

SS-18 [Operative Techniques (video): Laparoscopic and Robotic Urology]

Bursa Uludağ University 10-year extended criteria donor results

Mehmet Çağatay Çiçek, Kadir Ömür Günseren

Objective: To present the results of extended criteria donor in renal transplantation.

Material and methods: The functional outcomes of donors with extended criteria in renal transplantation between 2007 and 2017 were evaluated retrospectively.

Results: Of the 223 cadeveric donors, 332 kidneys including 109 pairs of kidneys and 114 single kidneys were donated to our center. The marginal donor rate in all cadaveric donors was 39.9% (89/223). The marginal renal use rate was 37.04% (123/332). Thirty-six kidneys were donated from 25 donors who were positive for two criteria between 50 and 59 years. The mean graft age was 54.6±2.7 years. The mean duration of cold ischemia was 13.4±2.5 hours. The graft survival rate in this group was 66.6%, and the patient survival rate was 83.3%. The mean 5-year creatinine level was 1.24±0.33, and 10-year creatinine level was 1.11±0.11 mg/dL. Fifteen kidneys were donated from 50-59 years old 3 positive donors. The mean age of the grafts was 55.06±2.4 years. The graft survival rate in this group was 66.6%, and the patient survival rate was 93.3%. The mean 36th month creatinine was 1.42±0.25 mg/dL. Seventy-two kidneys were donated from 51 donors aged ≥60 years. The mean age of the grafts was 67.7±6.8 years. The graft survival rate in this group was 56.9%, and the patient survival rate was 80.5%. The mean 5th year creatinine was 1.92±0.98; the mean 10th year creatinine was 1.39±0.61 mg/dL.

Conclusion: Although the use of extended criteria donors and functional results of our clinic are consistent with the literature, donated kidney use from these donors may play an effective role in solving the organ scarcity problem.

Keywords: Expanded criteria donor, marginal donor, renal transplantation

SS-20 [Prostate Cancer: Diagnosis]

Multiparametric magnetic resonance imaging-guided fusion prostate biopsy: Single-center experience

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Objective: Fusion prostate biopsy (FPB) is a method of prostate biopsy that has been described in the early 2010s and has gained popularity. It is recommended especially in patients with prostate-specific antigen (PSA) levels that is not so high, in patients with a history of previous negative biopsy, and in active surveillance. Multiparametric magnetic resonance imaging (MpMRI)-targeted prostate biopsy can be per-

formed in MRI (in-bore), in ultrasonography platforms with fusion software (FBP), or cognitively. In this study, we aimed to present our single-center FPB results.

Material and methods: Patients who underwent FPB in our clinic between December 2016 and May 2019 were included in this prospective study. Patients with PSA> 10 ng/mL and patients with a Prostate Imaging and Reporting and Data System (PI-RADS) score <3 were excluded from the study. Ultrasonograpyh with a rigid fusion software was used for MRI targeted biopsy (TB). Two to five core TB were taken from suspected lesions, and then 12-core standard prostate biopsy (SPB) was taken. Demographic data such as age, body mass index (BMI), and some clinical data such as PSA levels and histopathological examination results were analyzed. Cancer detection rates of TB, SPB, and combined approach (CB: TB+SPB) were calculated. Data are expressed as the mean±standard deviation or median (25^{th}-75^{th} percentile) according to their distribution characteristics. Mc-Nemar, Cohran-Q, and Fridman tests were used to compare categorical and numerical data of dependent variables. A p-value <0.05 was considered statistically significant.

Results: A total of 404 patients were included in the study. While 274 of them were biopsy naïve, 130 patients had a previous negative biopsy. The mean age of the patients was 62.38±7.19 years, and the median PSA values were 7.50 (5.40-9.34) ng/mL (Table 1). Clinically significant prostate cancer detection rates for TB, SPB, and CB were 25.5%, 30.2%, and 38.4%, respectively, and the most successful method was found to be the CB method (p<0.05). The number of median core and core/cancer detection rates for CB, TB, and SPB were 16.0 (16.0-18.0) and 1054/6733 (15.7%), 4.0 (4.0-6.0) and 386/1885 (20.5%), 12.0 (12.0-12.0), and 668/4848 (13.8%), respectively (p<0.001).

Conclusion: According to our results consistent with the literature, FPB applied in the form of CB was found to be a more successful method than SPB or TB alone. Further prospective studies with more patients are required.

Keywords: Fusion, prostate, biopsy

Table 1. Some demographic and clinical data of all patients involved in the study

Parameter	Value (n=404)
Age (year)	62.38±7.19
Body mass index (kg/m^2)	27.57±3.76
Serum PSA (ng/mL)	7.50 (5.40-9.34)
Prostate volume (mm^3)	56.01 (42.21-79.90)
Aneshtesia applied during FBP (n, %)	
Sedoanalgesia	187, 46.3%
Local	217, 53.7%
Cancer detection rates in PI-RADS	
3	64/238, 26.9%
4	54/104, 51.9%
5	37/62, 59.7%
Clinically significant cancer detection rate of biopsy naïve patients	111/274 (40.5%)
Clinically significant cancer detection rate of patients with previous negative biopsy	44/130 (33.8%)
Overall clinical significant cancer detection rate	155/404 (38.4%)
ISUP grade (n, %)	
1	92, 59.4%
2	25, 16.1%
3	15, 10.0%
4	17, 11.0%
5	6, 1.5%

SS-22 [Prostate Cancer: Diagnosis]

Comparison of the efficacy of local anesthesia methods and caudal regional anesthesia in prostate biopsy applied under transrectal ultrasonography

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Objective: To evaluate the efficacy of caudal regional anesthesia and local anesthesia methods in prostate biopsy applied under transrectal ultrasonography (TRUS).

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Material and methods: This prospective study included a total of 160 patients randomly separated into 4 equal groups as intrarectal local anesthesia (IRLA), periprostatic local anesthesia (PPLA), combined local anesthesia (IRLA+PPLA), and caudal regional anesthesia (CRA). The patients were evaluated using the pain scores on a visual analog scale.

Results: The pain score during anesthesia induction was significantly higher in the CRA group than in the IRLA and IRLA+PPLA groups ($p<0.001$). The pain score during the entry of the probe into the rectum and movement was lower in the CRA group than in other groups, with a statististically significant difference between the CRA and IRLA groups ($p=0.014$). The pain score on penetration of the needle to the prostate and at 30 mins after the biopsy was statistically significantly higher in the IRLA group than in the other 3 groups ($p<0.001$). No significant difference was determined between the other 3 groups. At 2 hours after the biopsy, the pain score in the CRA group was lower than in the other local anesthesia groups, with a statistically significant difference determined between the CRA and IRLA groups ($p=0.015$).

Conclusion: The application of PPLA alone can be applied more quickly than CRA, it causes less pain while applying the anesthesia, and it has similar efficacy in reducing pain during and after the prostate biopsy.

Keywords: Prostate biopsy, periprostatic local anesthesia, caudal regional anesthesia, pain

SS-25 [Urinary Stone Disease: Treatment (shock wave lithotripsy, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Comparison of the efficacy of silodosin and a terpene combination in the medical expulsive therapy of distal ureteral stones

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Objective: We aimed to compare the efficacy of silodosin and a terpene combination in the treatment of distal ureteral stones.

Material and methods: The data of the patients admitted to the urology policlinic with renal colics, diagnosed with distal ureteral stones, and followed up with medical expulsive therapy between December 2017 and June 2018 were retrospectively reviewed. The patients were divided into two groups: Group 1 comprised 72 patients that received 8 mg/day silodosin and Group 2 consisted of 51 patients that were given three capsules of a terpene combination (preparation containing the essential fatty acids of pinene [3%], camphene [15%], borneol [10%], anethol [4%], and cineol [3%] in olive oil) daily. The groups were compared in terms of the patients' demographic characteristics, medical history, localization of the present stone, renal collecting system status, daily fluid intake, number of emergency service visits, number of additional analgesic applications needed, number of pain attacks, number of days off work, stone expulsion rate, and time to stone expulsion.

Results: A total of 123 patients, 27 females (22%) and 96 males (78%), were included in the study. The mean age was 40.2±13.0 (min 18.0, max 78.0) years. For the 123 patients, the stone-free rate was calculated as 79.7%, and the mean time to stone expulsion was 9.4 (2.0-28.0) days. Of the 123 patients, 72 (58.5%) were in Group 1 (silodosin), and 51 (41.5%) were in Group 2 (terpene combination). No statistically significant difference was found between the groups in terms of gender, age, age group, body mass index, obesity, smoking status, alcohol consumption, education level, and presence of systemic diseases. When the stone properties were evaluated, no significant difference was observed in laterality ($p=0.237$). There was also no significant difference between the groups in terms of dilatation of the renal collecting system and the presence and degree of hydronephrosis ($p=0.385$ and $p=0.161$, respectively). The stone area was 32.6±18.2 mm^2 in Group 1 and 35.9±28.6 mm^2 in Group 2, with no statistical difference ($p=0.439$). The non-contrast computed tomography-Hounsfield unit was calculated as 648.4±305.6 for Group 1 and 581.9±260.2 for Group 2 ($p=0.227$). The daily fluid intake was 2.4±0.6 L in Group 1 and 2.5±0.7 L in Group 2 ($p=0.520$). The number of pain attacks was 1.8±1.4 and 1.1±2.3 in Groups 1 and 2, respectively, but without a statistical difference ($p=0.063$). The stone-free rate was 75.0% in Group 1 and 86.3% in Group 2, and there was no statistical difference between the two groups ($p=0.126$). However, the number of emergency service visits, number of additional analgesic applications needed, number of days off work, and time to stone expulsion were statistically significantly lower in Group 2 than in Group 1 ($p=0.024$, $p=0.029$, $p=0.011$, and $p=0.001$, respectively).

Conclusion: Silodosin and terpene combination seem to be effective expulsion therapy modalities in distal ureteral stones. However, the terpene combination is more effective than silodosin in managing pain and accelerating stone expulsion.

Keywords: Distal ureteric stone, medical expulsive therapy, silodosin, terpen combination, urolithiasis

SS-26 [Urinary Stone Disease: Treatment (shock wave lithotripsy, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Evaluating the predictive effectiveness and usability of the guy, CROES, and STONE nomograms, which are used for standard percutaneous nephrolithotomy, in the success and complicatıon rates of miniaturized percutaneous nephrolithotomy

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Objective: To evaluate the predictive effectiveness and usability of the Guy Nephrolithometric Scoring System (NSS), Endocrinology Society Clinical Research Unit (CROES), and STONE (stone size, accessory length, length of obstruction, calyx count including stone, stone density) nomograms, which are used for standard percutaneous nephrolithotomy, for the success rates, complications rates, and appropriate patient selection for mini percutaneous nephrolithotomy (MiniPNL).

Material and methods: Data of patients who underwent MiniPNL between September 2016 and May 2018 were retrospectively reviewed, considering the exclusion and exclusion criteria, from the electronic medical record system. All patients' GUY, CROES, and STONE scores were calculated. Demographic data, operative, and postoperative data of the patients were evaluated. The stone clearance status of patients was evaluated between 1 and 3 months using non-contrast computed tomography. Percutaneous nephrolithotomy (PNL) was considered successful if the patient was completely stone free. Complications were evaluated according to the Modified Clavien-Dindo classification.

Table 1. Area under the curve

	Area	p
STONE Score	369 (247-491)	0.038
CROES Score	649 (526-772)	0.018
Guy's Score	414 (294-533)	0.170

*95% confidence interval

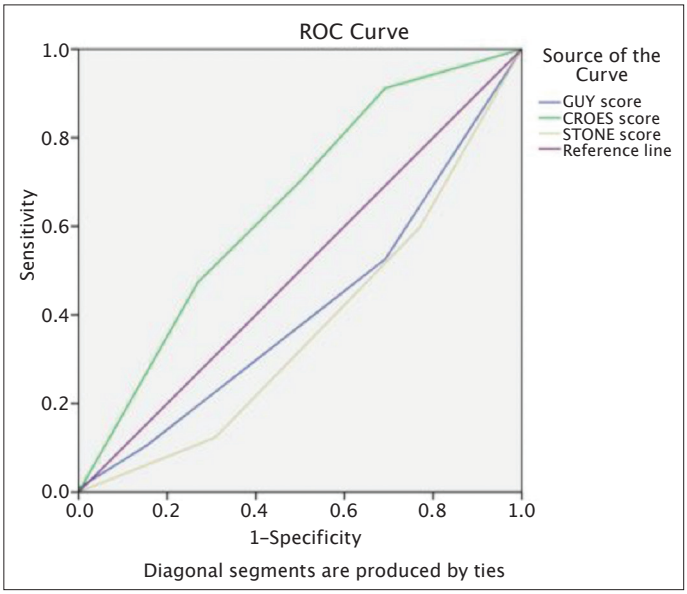

Figure 1. Prediction of success using Guy's, CROES, and STONE score

Results: In total, 140 patients (87 males and 53 females) were included in our study. No statistically significant difference was found between age, gender, body mass index, and stone size parameters when patients were compared in terms of complete stone clearance. The duration of operation and hospital stay were shorter in stone-free patients and these differences were statistically significant (p=0.048, p=0.015). The complication rate was found to be higher in stone-free patients, but this difference was not statistically significant (p=0.290). All three scoring systems were not statistically predictive for the complications (p=0.584, p=0.823, p=0.19). The success rates of STONE and CROES NSS were found to be statistically significant in terms of predicting the success rates of MiniPNL (p=0.043, p=0.018). The prediction of success with the GUY's NSS was not found to be significant (p=0.415).

Conclusion: For the first time in the literature, to the best of our knowledge, our study showed that STONE and CROES nomograms were independent parameters that predicted stone-free rates after MiniPNL. In addition, our study revealed that none of the NSSs used for the patients who underwent MiniPNL, was useful in predicting MiniPNL complications.

Keywords: CROES, GUY's, kidney stone, MiniPNL, nomogram, stone

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

SS-27 [Urinary Stone Disease: Treatment (shock wave lithotripsy, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Role of ureteral wall thickness in predicting spontaneous passage of ureteral stones

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Objective: Ureteral stones can be followed up for spontaneous passage if they are asymptomatic. In this study, we aimed to evaluate the role of ureteral wall thickness measured on computed tomography (CT) in the spontaneous passage of ureteral stones.

Material and methods: The results of 253 patients who were followed up in our clinic for uncomplicated ureteral stones <1 cm in size and evaluated by stone protocol CT were retrospectively analyzed. The maximum size of the stone and the thickness of the ureter wall at the location of the stone were measured from CT images. The follow-up was performed for 3 weeks for the stones to passage spontaneously. Logistic regression analysis was used to evaluate the factors predicting spontaneous passage.

Results: Stones were found to pass spontaneously in 104 out of 253 patients. Age, gender, use of alpha blockers, a previous history of stone surgery, and a previous history of stone disease were not associated with spontaneous stone passage. In a multivariate analysis, a stone <5 mm in size and the ureteral wall thickness <2.52 mm were determined as the predictors of spontaneous stone passage.

Conclusion: In the follow-up of uncomplicated ureteral stones, the presence of stones <5 mm in size and the ureter wall thickness <2.5 mm on CT images are the predictors of spontaneous stone passage. In patients who are not in this situation, it would be more appropriate to apply the active treatment options first.

Keywords: Spontaneous passage, thickness of the ureter wall, ureteric stone, urolithiasis

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SS-28 [Urinary Stone Disease: Treatment (shock wave lithotripsy, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Necesity of fluoroscopy during the flexible ureteroscopy in the treatment of renal stones

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Objective: To investigate the possibility and efficacy of the flexible ureteroscopy (fURS) without fluoroscopy during the treatment of renal stones.

Material and methods: Between April 2013 and August 2018, a total 576 patients were included, and patient data were evaluated retrospectively. All fURS operations were performed by experienced surgeons. All procedures were planned with zero-dose fluoroscopy. However, if the fluoroscopy was necessary for any reason, the patients were excluded from the study. Demographic data, perioperative parameters, stone-free rates, and complication rates were noted.

Results: Of patients planned fluoroless fURS, the procedure was successfully achieved in 96.7% (557 of 576 patients). Nineteen patients needed fluoroscopy during the procedure for any reason. In patients included in the study, the mean stone size was 11.6±5.2 mm, and the mean operation time was 39±48.2 min. After the first session fURS, the stone-free rate was achieved in 464 (83.3%) patients. The second- and third-session fURS with fluoroless were performed in 32 (5.7%) and 7 (1.2%) patients, respectively. An overall complication rate was 11.8%, and all complications were minor (Clavien/Dindo Grade 1 or 2).

Conclusion: The fluoroless fURS technique seems to be a safe and effective treatment compared to conventional fURS in patients with renal stones. This procedure can be performed in experienced centers. We think that the fluoroscopy was not mandatory during the fURS.

Keywords: Fluoroless, radiation, renal stone, flexible ureteroscopy, zero dose

SS-29 [Urinary Stone Disease: Treatment (shock wave lithotripsy, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Can visceral adiposity index predict the success rate of shock wave lithotripsy more specifically than body mass index?

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Objective: The incidence of urinary stone disease has increased in the past 5 decades due to various etiologies. One of the reasons for increased urolithiasis are the main changes in dietary habits that increase the risk of obesity. Since the 1980s, the shock wave lithotripsy (SWL) has effectively been used as a non-surgical technique to treat the urinary system stones. Morbid obesity is usually associated with increased stone-related morbidity compared to non-obese patients. Because the skin-to-stone distance (SSD) is greater in obese than in non-obese patients, fatty tissue may complicate the visualization of the stone. Hence, positioning and identification of the stone may be a problem. Currently, the classification

Table 1. Demographic and clinical outcomes of the groups

	Group 1 (n=32)	Group 2 (n=15)	Group 3 (n=20)	p
Age (Mean±standard deviation [SD])	48.3±10.3	51.1±6.6	5.8±12.1	0.007*
Body mass index (kg/m^2) (mean±SD)	27.2±1.5	33.9±3.3	22.7±3.0	-
Visceral adiposity index (VAI) (mean±SD)	6.6±5.6	13.3±9.1	5.8±4.4	0.02**
Waist circumference (cm) (mean±SD)	100.3±5.9	113.0±7.4	87±8.8	0.001
Stone-to-skin distance (mm) (mean±SD)	103.9±34.4	124.5±18.0	85.3±35.6	0.001
Stone density (Hounsfield unit) (mean±SD)	659.5±522.5	564.5±323.9	539.9±330.2	>0.05
Presence of Hydronephrosis				
No	6	7	8	-
Minimal	12	3	6	
Medium	8	5	6	
Severe	6	-	-	
Stone Localization				
Upper pole	2	2	-	
Middle pole	6	2	5	-
Lower pole	1	2	3	
Renal pelvis	10	4	5	
Upper ureter	13	3	6	
Midureter	-	2	1	
Lower ureter	-	-	-	
Energy level	14.6±1.7	14.2±4.5	15.0±2.6	0.67
Total shock count (mean±SD)	6251.7±2388.2	5232.0±2808.8	6044.7±2824.8	0.48
Shock wave lithotripsy success rate (n, %)				
Overall				
According to VAI subgroups	19 (63.3)	8 (53.3)	16 (75)	0.09
1.0-5.0	9 (56.3)	2 (100.0.)	10 (100.0)	
5.1-10.0	9 (75.0)	2 (40.0)	3 (50.0)	
10.1-15.0	1 (100.0)	1 (100.0)	1 (50.0)	
15.1-20.0	-	2 (33.3)	-	
>20.0	-	1 (33.3)	1 (100.0)	

Group 3 was significantly younger than Groups 1 and 2, **VAI in Group 3 was significantly lower than in Group 2, but similar to Group 1

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

of obesity is made using the body mass index (BMI) formula. The visceral adiposity index (VAI) was first described by Amato et al. in 2010. For years, the association between cardiovascular diseases and metabolic syndrome and VAI has being investigated. The VAI is calculated using the waist circumference (WC), serum triglyceride, HDL cholesterol, and BMI in a formula. To date, the use of VAI in urology practice has been limited, with a report that investigated the impact of VAI on erectile function. In this study, we aimed to investigate the impact of VAI on the SWL success compared to BMI.

Material and methods: Sixty-seven patients who underwent SWL for urinary stone disease were included into the study. Patients were divided into three groups according to BMI: Group 1, overweight (BMI, 25-29.9 kg/m^2); Group 2, Grade I and grade II obesity (BMI, 30-40 kg/m^2); and Group 3, normal weight (BMI, 18-24.9 kg/m^2). The mean age, BMI, VAI, waist circumference, stone burden, SSD, and stone density were recorded. The presence of hydronephrosis, stone localization, energy levels, and shock count were also recorded.

Results: The mean age, BMI, VAI, WC, stone burden, SSD, stone density, presence of hydronephrosis, stone localization, energy level, and total shock count of the groups are given in Table 1. The overall success rate of SWL was 75%, 63.3% and 53.3% in Groups 3, 2, and 1, which was significantly higher in Group 3 compared to Groups 1 and 2 (p=0.02). However, the SWL success rates according to different VAI categories were similar between the groups.

Conclusion: The fact that obesity is associated with a longer SSD and increased adipose tissue, may reduce the stone visibility. This indirectly reduces the SWL success. Results of our study showed that the SWL success was significantly higher in non-obese patients compared to obese patients, but different VAI categories had no effect on SWL success rates.

Keywords: Shock wave lithotripsy, success, obesity, visceral adiposity index

SS-34 [Endourology (Non-stone) Treatment]

Endoscopic treatments of parapelvic renal cysts by flexible ureteroscopical incision

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Objective: Parapelvic cyst can compress the collecting system and could be the reason for some urinary symptoms. Cyst drainage or wall excision could be a curative treatment. Our goal was to compare the efficacy and safety of surgical techniques with holmium laser incision with flexible ureteroscopy and DJ stent inserting.

Material and methods: Thirteen parapelvic cysts were included in the study between January 2017 and February 2019 in our center. Contrast-enhanced computed tomography (CT) imaginings were conducted in all patients. The compression effect of parapelvic cyst on the renal collective system was observed in the vast majority of cases. All patients were symptomatic. Surgical procedure was done under the general anesthesia with Flex x2 (Karl Storz, Tutlingen, Germany). Operative outcomes and patient features were recorded. The thinnest point of the cyst wall looks like a blue dot on the obvious parapelvic compression site was incised. The internal drainage was obtained by double-J tubes for 6 weeks. The DJ stent was extracted with cystoscope at local anesthesia. Control imaging was performed with the non-contrast CT.

Results: Thirteen cases were included in the study. The mean cyst diameter was 88.2 mm, and the mean age 60.1 years. The mean operative time was 25 minutes. Clavien 1 complications occured in 2 patient, and Clavien 2a complication occurred in 1 patient. The follow-up time was 6-30 months (average 8 months). Radiologic success was defined as no recurrence of the cyst or a reduction in cyst size by at least one half. The cyst disappeared in 7 patients; the diameter of the cyst in 3 cases was reduced by more than half, and the remaining 3 patients' cysts did not significantly change. The total success rate was 76% at the end of the follow up. The parapelvic cyst using a flexible incision with the holmium laser was an effective and feasible treatment way. Parapelvic cysts could be treated by this technique with safety and unsignificant complications.

Keywords: Endoscopic treatments, flexible ureteroscopical incision, parapelvic renal cysts

SS-35 [Urinary Stone Disease: Treatment (SWL, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Comparison of scoring systems in terms of the stone-free rate after flexible ureterorenoscopy for kidney stones

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Objective: We aimed to compare the Resorlu-Unsal stone score, the RIRS scoring system, and the Modified Seoul National University Stone Complexity (S-ReSC) scoring systems to evalute the stone-free rates after flexible ureteronoscopy (f-URS) for kidney stones.

Material and methods: We retrospectively evaluated the f-URS surgeries that were performed by surgeons whose learning curve was completed in the last 1 year. Ninety-three patients who underwent postoperative computed tomography (CT) to evaluate stone-free status were included in the study. Scoring was performed by the preoperative imaging of the patients. A stone-free status was defined as a ≤4 mm fragment in postoperative CT, and the factors affecting the stone-free status were evaluated.

Results: The mean age was 45.07±13.32 years. The mean stone size was 15.4±4.31 mm. The stone-free rate was 82.8%. The median Resorlu-Unsal score was 0 (0-3). The median RIRS score was 5 (4-10), and the (S-ReSC) was 1 (1-12). The stone size and scoring systems were found to be significant in predicting the stone-free condition in an univarity analysis. Meanwhile, only RIRS and S-ReSC scores were determined as predictive factors of the stone-free condition in the multivariate analysis (Table 1). In the ROC curve, all scoring systems had a high predictive ability in terms of the stone-free rate.

Conclusion: All scoring systems are effective in determining the stone-free rate for f-URS. The predictability of S-ReSC and RIRS scoring systems were higher.

Keywords: Flexible ureterorenoscopy, kidney stone, scoring system

Table 1. Factors for determining stone-free rate

	Univariable analysis		Multivariable analysis	
	OR (95% CI)	p	OR (95% CI)	p
Stone size	1.2 (1.09-1.4)	0.0001	0.775 (0.5-1.12)	0.17
R.I.R.S score	12.9 (3.4-48.6)	0.000	23.35 (2.88-188.761)	0.003
S-ReSC	1.67 (1.3-2.1)	0.000	1.67 (1.049-2.67)	0.03
Resorlu-Unsal	3.96 (1.8-8.6)	0.0001	0.87 (0.09-8.45)	0.9

SS-36 [Urinary Stone Disease: Treatment (SWL, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Factors for predicting early infection after retrograde intrarenal surgery in 1–2 cm renal stones

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Objective: Although the retrograde intrarenal surgery (RIRS) is a minimally invasive treatment, postoperative urinary tract infections develop in 9%-25% of cases. The aim of this study was to investigate the factors predicting postoperative early infection after RIRS.

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Table 1. The demographic characterisics and perioperative findings

	Postoperative UTI		
	Present (n=20)	Absent (n=269)	p
Age (year)	47.8±12.6	47.9±14.7	0.988
Gender			
Male	9 (45%)	162 (60.2%)	
Female	11 (55%)	107 (39.8%)	0.181
BMI	26.3±3.2	27.4±4.7	0.436
DM			
Present	3 (15%)	57 (21.1%)	
Absent	17 (85%)	212 (78.9%)	0.51
HT			
Present	4 (20%)	69 (25.6%)	
Absent	16 (80%)	200 (74.4%)	0.575
Charison Comorbitidy Index			
0-1	14 (70%)	202 (77.9%)	
22	6 (30%)	57 (22.1%)	0.41
Stone diameter (med)	13.5±4.1	15±3.6	0.285
Stone localization			
Upper caliceal	3 (15%)	9 (3.3%)	
Medium calyceal	2 (10%)	29 (10.8%)	
Lower calyceal	4 (20%)	90 (33.4%)	
Renal pelvic	8 (40%)	72 (26.8%)	
Proximal ureter	0 (0%)	12 (4.5%)	
Multiple	3 (15%)	67 (24.9%)	0.090
Preoperative hydronephrosis			
Present	8 (40%)	140 (52.1%)	
Absent	12 (60%)	128 (47.9%)	0.55
UTI history			
Present	11 (55%)	55 (20.5%)	
Absent	9 (45%)	214 (79.5%)	0
Preoperative Dj stent			
Present	8 (40%)	63 (23.4%)	
Absent	12 (60%)	206 (76.6%)	0.097
Access sheat use			
Present	10 (50%)	157 (58.4%)	
Absent	10 (50%)	112 (41.6%)	0.465
Operation duration (min) med	62.5±16.6	60±19.4	0.008
Residual calculus			
Present	3 (30%)	93 (34.6%)	
Absent	17 (70%)	176 (65.4%)	0.073

UTI: urinary tract infection; ave: average; med: median; BMI: body mass index; DM: diabetes mellitus; HT: hypertension; SD: standard deviation; c: chi square test; m: Mann-Whitney U test; t: independent sample t test

Table 2. The preoperative full urianalysis and its relation with postoperative UTI

	Postoperative UTI		
Preoperative FU	**Present**	**Absent**	**p**
Leukocyte med	22.5±196.2	7.0±86.9	0.009
Pyuria			
Absent	3 (15%)	108 (40.2%)	
Present	17 (85%)	161 (59.8%)	0.026
Leukocyte esterase			
-	2 (10%)	98 (36.4)	
+	18 (90%)	171 (63.6%)	0.017
Nitrite			
-	13 (65%)	246 (91.4%)	
+	7 (35%)	23 (8.6%)	0.000

UTI: urinary track infections; FU: full urianalysis; med: median; pyuri: leukocyte≥ 5; Chi square test, m: Mann-Whitney U test; Independent sample t test

Material and methods: Of the 642 patients who underwent RIRS for proximal ureteral stones and/or kidney stones between September 2013 and July 2019, a total of 289 patients with a total stone size 1-2 cm were included into the study. Patients were divided into two groups with and without a postoperative urinary tract infection. The demographic data and perioperative findings of all patients were retrospectively reviewed. Sterile urine cultures were obtained in all patients during the preoperative 30-day period and the urine analysis values were included in the data.

Results: Urinary system infection (UTI) was observed in 20 (6.9%) of 289 patients who had RIRS with stones 1-2 cm in size. The majority of the patients who developed postoperative UTI were female, whereas the rate of male patients was higher in the non-UTI patients (55% vs. 39.8%, p=0.181). The age, body mass index, accompanying diabetes mellitus, hypertension, and Charlson comorbidity index were similar. There was no statistically significant difference between the two groups in terms of the stone diameter and stone localization (median diameter 13.5 vs. 15, p=0.285). Patients with postoperative UTI had a higher rate of UTI history (55% vs. 20.5%, p=0.000) and longer operative times (62.5±16.6 vs. 60±19.4, p=0.008) (Table 1). It was found that in patients with a postoperative UTI, the leukocyte count was higher in urinanalysis, which was obtained at the same time with sterile urine cultures. The rate of pyuria and leukocyte esterase and nitrite positivity were observed more frequently in patients with postoperative UTI (Table 2). In a multivariate analysis, a UTI history, prolonged operative time, and nitrite positivity in preoperative urinanalysis were found to be independent risk factors for postoperative UTI in RIRS patients with stones 1-2 cm in size (Table 3).

Conclusion: The nitrite positivity in preoperative urinanalysis, a history of UTI, and a prolonged operation time are the factors that predict the postoperative infection in RIRS for stones 1-2 cm in size. Clinicians should monitor these cases carefully for febrile UTI in the postoperative period.

Table 3. Factors that affect postoperative UTI-univariate and multivariate analyses

	Univariate analysis			Mutivariate analysis		
	OR	95% CI	p	OR	95% CI	p
Preoperative Dj stent	2.18	0.85-5.57	0.103			
UTI history	4.76	1.87-12.04	0.001	5.03	1.86-13.59	0.001
Preoperative hydronephrosis	0.60	0.24-1.51	0.28			
Access sheat use	0.71	0.28-1.77	0.467			
Operation duration	1.03	1.01-1.05	0.025	1.04	1.01-1.06	0.006
Residual calculus	0.34	0.09-1.17	0.086			
Leukocyte number in full urianalysis	1.004	1.001-1.007	0.002			
Presence of pyuri	3.80	1.08-13.29	0.036			
Leukocyte esterase positivity	5.16	1.17-22.70	0.03			
Nitrite positivity	5.76	2.09-15.86	0.001	8.31	2.61-26.5	0.000

Cox regression analysis. UTI: urinary tract infection; pyuri: leukocyte≥ 5

Keywords: Postoperative infection, RIRS, stone disease

SS-37 [Urinary Stone Disease: Treatment (SWL, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Role of robotic-assisted flexible ureteroscopy in the management of kidney stones

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Objective: The EAU and AUA guidelines universally recommend PCNL as the first-choice treatment for large renal stones. The lower success rates in larger stones with classical RIRS approach has led the use of the latest iteration of master-slave robotics in this field, and the RA-RIRS technique has been found to increase the stone-free rates meaningfully with some certain advantages for the patient, endourologist, and the endoscopic device as well.

Material and methods: A total of 286 large stones were treated robotically, and the volumes of the stones, calculated by CT, robot time, fragmentation time and efficiency, sheat size, and complications were noted. Stone-free rates were assessed by CT after 3 months to search the advantages of the Avicenna Roboflex robotic-assisted retrograde intrarenal surgery (RA-RIRS) in the minimal invasive management of large stones.

Results: The mean stone volume was 1345 mm^3. The upper stone volume limit was 4000 mm^3 and that of the mean HU was 1250 for RA-RIRS in large stones; a stone-free rate of 89% was obtained in a single session. A complete stone fragmentation (stone-dusting time 74 minutes, fragmentation efficiency 32 mm^3/min).

Conclusion: The Avicenna Roboflex allows a safe and efficient treatment of renal stones larger than the size recommended by current international guidelines. In addition to the significant optimization of patient safety and instrument durability, this new technique provides an improved comfort and ergonomics, touch-screen adjustable endoscope motion scaling, laser fiber positioning, and control of the irrigation flow without the risk of the radiation exposure.

Keywords: Avicenna Roboflex, large kidney stones, efficiency

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

SS-38 [Urinary Stone Disease: Treatment (SWL, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Comparison of retrograde intrarenal surgery and percutaneous nephrolithotomy costs in surgical treatment of kidney stones

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Objective: To compare the costs of retrograde intrarenal surgery (RIRS) and percutaneous nephrolithotomy (PCNL) treatments in kidney stones.

Material and methods: Data of the patients who had RIRS or PCNL operation because of the kidney stone >1.5 cm in our clinic were evaluated retrospectively. The parameters examined included demographic information, stone characteristics, type and number of operations, postoperative complications, transfusion requirement and antibiotic use, length of hospital stay, and cost of treatment.

Results: A total of 108 patients (RIRS with 54 and 54 with PCNL) were included in the study. Of the patients, 71 were male and 37 were female. The mean stone size in patients with RIRS was 1.9±0.4 cm. The mean duration of hospital stay was 1.4 days in patients with RIRS and 4.4 days in patients with PCNL, but it was significantly higher in patients with PCNL (p<0.001). Postoperative transfusion requirement was significantly higher in patients with PCNL (p=0.027), and postoperative antibiotic use was similar in both groups (p=0.113). The average number of operations required for RIRC patients to be stone-free was 1.24±0.43. When the cost of equipment was excluded, the cost of being stone-free for a RIRS patient was 1896±980 TL, and that of patients with PCNL was 2759±169 TL (p<0.001). When the equipment cost was added, the cost for patients with RIRS was 2896±980 TL, and the cost for patients with PCNL was 3409±169 TL.

Table 1. Comparison of RIRS and PCNL patients

	RIRS	PCNL	p
Age (years)	48.6±12.3	50.8±11.9	0.336
Average hospital stay (days)	1.4	4.4	<0.001
Postoperative transfusion needs	0	6 (11.1%)	<0.001
Postoperative antibiotic needs	1	6	0.113
Treatment cost (Turkish Lira)	2896±980	3409±169	<0.001

Conclusion: RIRS and PCNL are current methods in the treatment of kidney stones. RIRS is more minimally invasive than PCNL. However, as the stone size increases in RIRS, the number of operations required to achieve the stonelessness increases. Even when the flexible cystoscope costs are added, the RIRS treatment is cheaper than PCNL.

Keywords: RIRS, PCNL, treatment, cost, kidney stone

SS-39 [Urinary Stone Disease: Treatment (SWL, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Are lower calyceal stones still a problem for RIRS? Results of our 314 cases

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Objective: The treatment of lower-pole stones of the kidney is special because of its anatomical properties. In current guidelines, retrograde intrarenal surgery (RIRS) appears to be a treatment option for lower renal calyceal stones <2 cm in size. We aimed to evaluate our stone-free rates according to the stone size in patients who underwent RIRS for renal lower calyceal stone in our clinic.

Material and methods: Data of 314 patients who underwent RIRS for renal lower calyceal stones were evaluated between July 2014 and July 2019, retrospectively. Demographic data, stone localization/number/size and density, the presence of renal anomaly, length of hospital stay, presence of complications, and stone-free rates were analyzed from the patient files. Complication rates were evaluated using the modified Clavien system. Patients were divided into three groups according to the stone size: <10 mm (Group 1), 10-20 mm (Group 2), and >20 mm (Group 3). The stone-free rates and residual stone sizes were compared between the groups. All patients were informed about the procedure, and their written informed consent was obtained. All patients underwent rigid ureterorenoscopy prior to RIRS with spinal or general anesthesia to evaluate the

presence of ureteral pathology. Then, a ureteral access sheath was placed, and stones were fractured with holmium laser. A DJ stent was placed to high-stone burden patients. Stone-free rates were evaluated by CT taken 1 month after operation. The presence of stones >2 mm in size was considered as the presence of a clinically significant residual stone.

Results: A total of 314 patients, 120 females and 194 males, were included in the study. There were 98 patients in Group 1, 121 patients in Group 2, and 95 patients in Group 3. There was no statistically significant difference in terms of age, gender, body mass index, American Society of Anesthesiologists (ASA) scores, stone direction between groups. The mean duration of surgery was 43.79 minutes (15-120): 35.4 minutes (15-70) in Group 1, 45.2 minutes (20-110) in Group 2, and 51.2 minutes (30-120) in Group 3 (p<0.001). The stone-free rate was 77% in all patient groups combined: 96.9% in Group 1, 76.8% in Group 2, and 56.8% in Group 3. The mean residual stone volume was 8.3 mm, 7.5 mm, and 12.9 mm in Groups 1 to 3, respectively (p<0.001). The duration of hospital stay was 1.1 (1-9) days in Group 1, 1 (1-2) days in Group 2, and 1.1 (1-4) days in Group 3. No Clavien 3-5 complications were observed in any group, whereas Clavien 1-2 complications were observed in 6 patients in Group 1, 7 patients in Group 2, and 12 patients in Group 3.

Conclusion: In recent years, a reduction in the diameter of flexible ureterorenoscopes and increase deflection capabilities, spread of thin laser fibers, and increased surgical experience have led to an increase in the RIRS success in the lower calyceal stones. Especially in symptomatic small kidney stones, RIRS is less invasive than percutaneous nephrolithotomy, and the success rates are similar to ESWL. In our study, a high success rate was obtained in stones <1 cm in size, and the success rates decreased as a stone size increased and as a need for an increased session requirement arose. In the treatment of lower calyceal stones, RIRS is a good treatment option if the stone burden is considered.

Keywords: Lower-pole stones, flexible ureteroscopy, retrograde intrarenal surgery

Table 1. Demographic results

Stone Size	<10 mm	10 mm-20 mm	>20 mm	p
Age	48.5 (23-77)	46.8 (18-82)	50 (20-82)	0.13
Gender, n (%)				
Female	40 (40.8)	43 (35.5)	37 (38.9)	0.71
Male	58 (59.2)	78 (64.5)	58 (61.1)	
Body mass index	26.2(20-40)	26.5 (18-39)	26.9 (19-45)	0.33
Side, n (%)				
Right	38 (38.7)	55 (45.4)	36 (37.8)	
Left	60 (61.3)	66 (54.6)	59 (62.2)	
Stone number	1.2 (1-3)	1.3 (1-4)	1.9 (1-5)	<0.001
Dencity (HU)	892.90 (360-1381)	732.84 (369-1515)	837.05 (347-1402)	<0.001
Operation time (min)	35.4 (15-70)	45.2 (20-110)	51.2 (30-120)	<0.001
Stone-free rate %	96.9	76.8	56.8	

SS-41 [Adrenal-Testicular Tumors-Treatment]

Epidermoid cyst of the testis, 5-year follow-up results in adults

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Objective: The epidermoid cyst of the testis are benign simple epithelial tumors and an uncommon lesion that accounts for about 1% of all testicular mass. Dockerty and Priestly first described testicular epidermoid cyst in 1942. The etiology is not exactly known, and the most widely accepted theories are that the cysts are monodermal teratomas or squamous metaplasia of surface mesothelium. In testicular epidermoid cysts, inguinale orchiectomy is a sufficient treatment, whereas in childhood, partial orchiectomy or enucleation is applied. Here, we report demographic and clinical characteristics and the long-term outcomes in patients with epidermoid cyst of the testis, and we aimed to

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

share our experiences about patients with epidermoid cyst of the testis. We report the demographic and clinical characteristics of epidermoid cyst and the long-term results.

Material and methods: Thirteen patients with epidermoid cyst of the testis between June 2000 and January 2018 were evaluated retrospectively. Ten patients, whose data were evaluated, were included into the study. Patients' medical records were reviewed. Patient age, initial complaint (such as scrotal pain, swelling, mass, or infertility), location of tumor (right or left testis), smoking habits, history of undescended testis, family history, preoperative lactic dehydrogenase (LDH), alpha-fetoprotein (AFP), and β-human chorionic gonadotrophin (β-HCG) levels, diagnostic imaging findings, pathology results, and the follow-up time were eveluated. Patients were routinely assigned with scrotal ultrasonography. When in case of need that contrast-enhanced magnetic resonance imaging was performed. The testicular mass volume was calculated using three formulas: length (L) x width (W) x height (H) x 0.52 [6]. Imaging methods and results were evaluated by specialized uroradiologists. Routine inguinal approach and orchiectomy were performed to all scrotal masses in our clinics. Pathological specimens were reviewed by third genitourinary pathologist. Annual follow-up was recommended for all patients.

Results: For the 10 patients included in analyzes, the mean age was 29.7 years (range, 20-53 years). Eight out of 10 patients who were admitted with testicular mass were located on the left side of the scrotum, and 2 of them were located on the right side. One patient presented with scrotal pain (10%). Three patients admitted with scrotal swelling (30%). Three patients had both scrotal pain and swelling (30%). Three patients with a testicular mass presented with a painless lump (30%). Seventy percent of all patients were smokers or tobacco users. One patient (10%) was followed up with the diagnosis of undescended testis in childhood, but no surgical treatment was performed. None of the patients had a family history. The mean testicular mass volume was 28 mm^3 (range, 13-51 mm^3). All of patients' preoperative mean β-hCG, AFP levels, and LDH isoenzymes were normal (1.16 mIU/mL, 1.24 ng/mL, and 265.44 U/L, respectively). The mean follow-up period was 66.9 months (range, 12-216 months).

Conclusion: The epidermoid cyst of the testis should be kept in mind especially in lesions negative for tumor markers and suggest radiological findings typically of epidermoid cysts. There is no need for an annual follow-up.

Keywords: Epidermoid cyst, testis, germ cell tumor

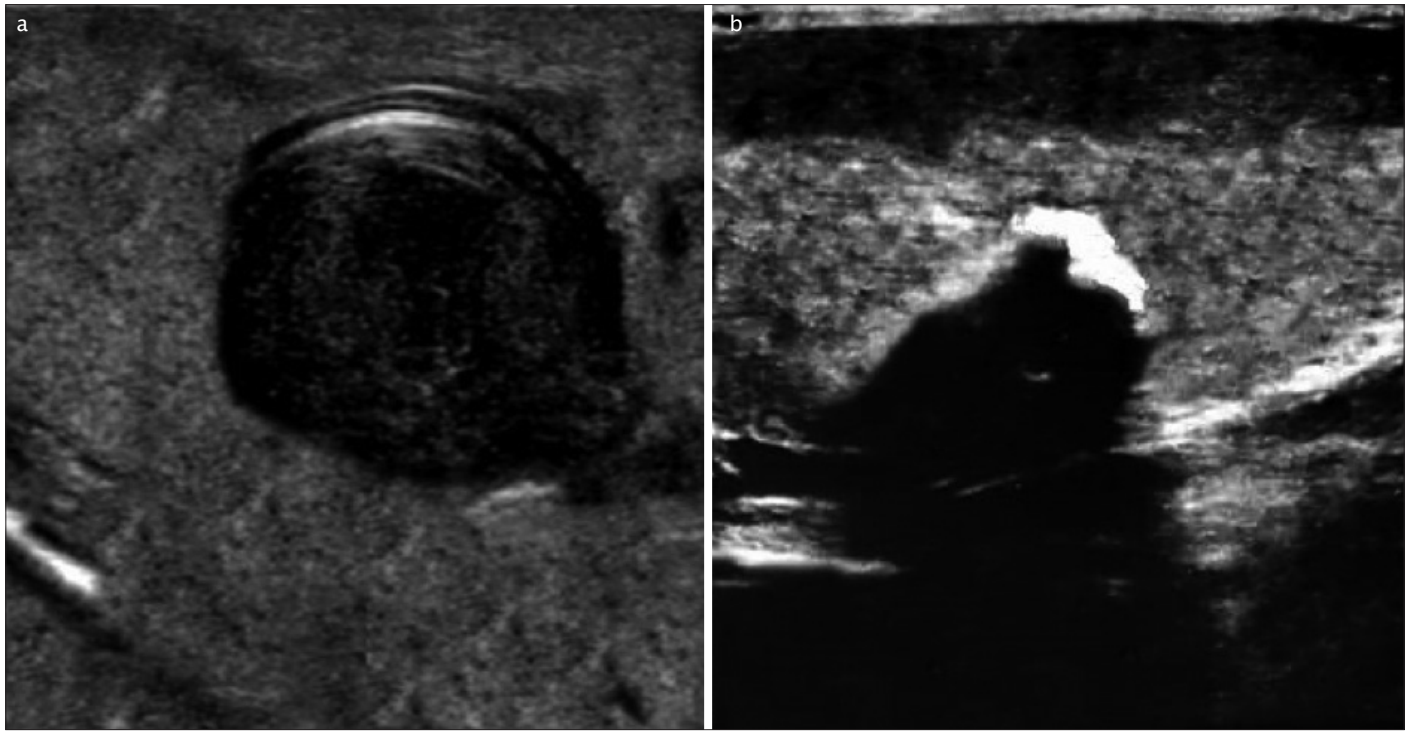

Figure 1. a, b. Ultrasonographic aspect of an epidermoid cyst of testis

SS-42 [BPH: Treatment (Medical - Surgery)]

Prediction model of operation efficacy using the protruding prostate lobe volume in patients who are candidates for transurethral resection of prostate

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Objective: To create a prediction model that could preoperatively measure the success of the transurethral prostate resection (TURP) because of the bladder outlet obstruction (BOO).

Material and methods: Patients aged 50-80 years who underwent TURP (October 2017-April 2018) were examined prospectively and evaluated with respect to the preoperative and 2nd month postoperative values of Qmax, international prostate symptom score (IPSS), quality of life (QoL), and postvoiding residual (PVR) urine amount. On the preoperative transabdominal ultrasonography, a total prostate volume (TPV) and protruding prostate lobe volume (PPLV) were measured, and the protruding ratio (PR), as the ratio of PPLV to TPV, was calculated. The length and width of the prostate protruding transversely at the level of the bladder floor were measured for the PPLV. Then by measuring the height of the protrusion on the sagittal slice, the product of these three measurements was multiplied again by 0.523. Based on the mean of the preoperative and postoperative Qmax difference (Qmax-D) value, Group 1 (n=33) was defined as "low efficacy" and Group 2 (n=30) as "high efficacy."

Results: A correlation was determined between the Qmax-D, IPSS-D, PVR-D, and QoL-D measured for the efficacy of the operation, and TPV, PPLV, and PR (Spearman/Pearson Correlation). As the mean Qmax-D was calculated as 9.31±5.70, Group 1 (n=33) was formed of those with Qmax-D≤9 and Group 2 (n=30) as those with Qmax-D≥10. In the evaluation of the efficacy of TURP when the univariate analysis was applied, TPV had no signfcance in the TURP efficacy, and PVR-1, IPSS-1, PPLV, and PR were observed to be statistically significant. The results of

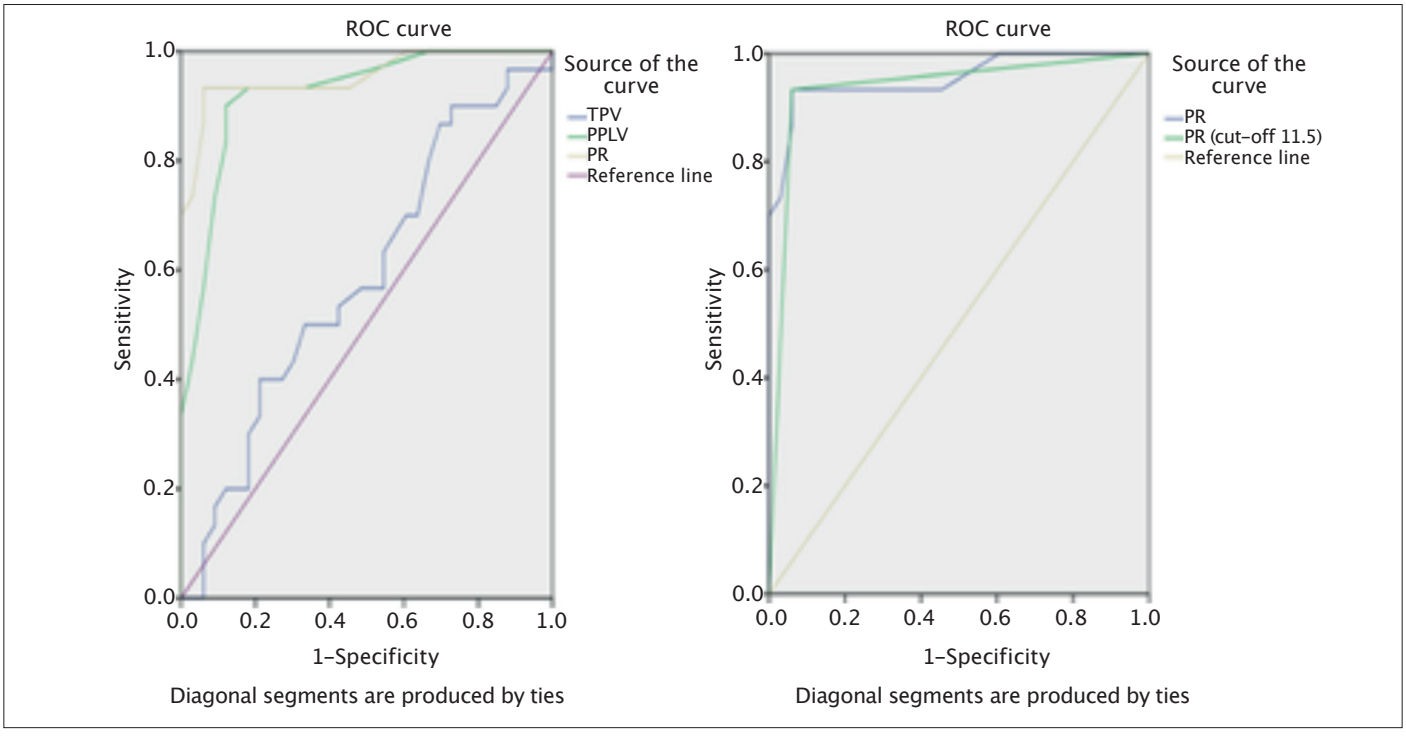

Figure 1. ROC curve evaluation of TPV, PPLV, PR and PR Cutoff (11.5) for "high efficacy"

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

a multivariate analysis showed the main effect to be created by PR (p=0.000) (OR=1.596). In the evaluation with the ROC curve analysis of high efficacy obtained in the TURP, a significantly powerful effect was determined for the measurements of PPLV (AUC=0.922 (0.855-0.989), p=0.000) and PR (AUC=0.954 (0.982-1.000), p=0.000) (Figure 1). The cutoff value of 11.5 was obtained at a proper rate because of its high sensitivity and specifity for PR (AUC=0.936 (0.866-1.000), p=0.000) (Graph 1). The efficacy sensitivity and the positive predictive value were recorded as 93.3%, and specificity and the negative predictive value as 93.9% (kappa, p=0.000).

Conclusion: When determining candidate patients for TURP surgery due to BOO, measurements of the PPLV, and especially the PR, should be taken into consideration in the preoperative prediction of efficacy.

Keywords: Bladder outlet obstruction, protruding prostate lobe volume, transurethral resection of prostate, ultrasonography

SS-44 [Lower Urinary Tract Pathologies, Urodynamics, Neurourology: Treatment]

Relation between severity of coronary artery disease and catheter-associated urethral stricture in patients with acute coronary syndrome coronary artery disease severity and urethral stricture

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Objective: Different arterial segments throughout the vascular system develop similar grades of atherosclerosis concomitantly. Urethral ischemia has been proposed as a cause of urethral stricture. Therefore, we aimed to investigate the relation between coronary artery disease severity using a SYNTAX score and urethral stricture occurrence after urethral catheterization in patients with non-ST-segment elevation acute coronary syndrome (ACS).

Material and methods: The study included 306 male patients with a urethral catheter inserted who had been diagnosed with ACS. Hospital records were reviewed to collect the follow-up data of patients regarding the occurrence of urethral stricture after urethral catheterization. The study population was divided into two groups according to the urethral stricture development, and both groups were compared statistically according to clinical, laboratory, demographic, and angiographic features.

Table 1. Demographic, clinical, laboratory and coronary angiographic characteristics of all patients

	All patients (n=768)	Patients without urethral stricture (n=276)	Patients with urethral stricture (n=30)	p
Age (years)	61±12	61±12	63±11	0.234
Diabetes mellitus, n (%)	99 (32.4)	83 (30.1)	16 (53.3)	0.01
Hypertension, n (%)	143 (46.7)	124 (44.9)	19 (63.3)	0.055
Body mass index (kg/m^2)	27.71±3.82	27.65±3.77	28.32±4.22	0.605
Peak troponin (pg/mL)	853 186-2240	961 195-2410	183 152-442	<0.001
Left ventricular ejection fraction (%)	53±6	53±6	52±7	0.559
Urethral catheterization duration	2 2-2	2 2-2	2 2-2	0.907
LMCA disease, n (%)	9 (2.9)	4 (1.4)	5 (16.7)	<0.001
Chronic total occlusion, n (%)	32 (10.5)	19 (6.9)	13 (43.3)	<0.001
Heavy calcification, n (%)	30 (9.8)	25 (9.1)	5 (16.7)	0.184
SYNTAX score	16±9	15±7	29±10	<0.001

Results: Urethral stricture was seen in 9.8% (n=30) of the study population. SYNTAX scores were significantly higher in patients with urethral stricture than in those without urethral stricture (15±7 vs. 29±10; p<0.001). The SYNTAX score (OR, 1.238; 95% CI, 1.148-1.336; p<0.001) and diabetes were found to be independent predictors of urethral stricture. The ROC curve analysis showed that the cutoff value of the SYNTAX score for the urethral stricture prediction was >22.5, with a 76.7% sensitivity and 85.1% specificity ([AUC]=0.879; 95% CI, 0.838-0.914; p<0.001).

Conclusion: Coronary artery disease severity graded by a SYNTAX score is found to be an independent predictor of urethral stricture occurrence in ACS patients with a urethral catheter inserted.

Keywords: Acute coronary syndrome, urethral catheterization, urethral stricture, SYNTAX score

SS-46 [Operative Techniques: Reconstructive Techniques]

Advantages of the non-transecting urethroplasty in short bulbar urethral strictures

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Objective: Urethroplasty is the gold standard in the treatment of urethral strictures with a high success and low morbidity rate. Bulbar urethroplasty techniques are divided into two classes, namely transecting and non-transecting techniques. The transecting urethroplasty method performed on short bulbar urethral strictures is defined as an excision and primary anastomosis [end-to-end anastomosis] (EPA). This study was designed to compare EPA to non-transecting urethroplasty, which is another method that was developed to preserve the urethral blood supply.

Material and methods: Demographic characteristics, stricture characteristics, and surgical outcomes (complications, operative time, bleeding volume, hospitalization time, postoperative erectile function score) of male patients who underwent EPA and NTU at our clinic for bulbar urethral strictures <3 cm between January 2009 and March 2019 and continued follow-up for a minimum of 6 months were retrospectively evaluated. Patients with a history of failed hypospadias repair and previous radiotherapy were not included in the study. The surgical decision regarding the technique to be adopted was made by the surgeon considering the length, etiology, and localization of the stricture, and previous failed treatments, besides factors such as age, presence of comorbidities, and quality of life. Following the removal of the urethral catheter, patients were assessed using retrograde urethrogram and uroflowmetry. Patients underwent follow-up uroflowmetry at the 3rd, 6th, and 12th months, and at yearly intervals thereafter. Urethroscopy was performed if stricture was suspected. The absence of voiding complaints and a maximum flow rate >15 ml/s were considered the criteria for success.

Results: Urethroplasty procedures were performed on a total of 101 patients and associated with a median follow-up time of 25 (7-119) months (EPA; 52.3±36.3 months, NTU; 16.8±6.5 months [p=<0.001]). Seventy-three patients underwent EPA, and 28 underwent NTU; there were no statistically significant differences between the two groups with regard to age, the mean American Society of Anesthesiologists scores, mean body mass index (kg/m^2), mean stricture length, number of previous internal urethrotomy procedures, etiological cause, mean

Table 1. The demographic and obstruction properties, success rates and surgery results of patients

	EPA (n=73)	NTU (n=28)	p
Age	48.6±15.6	50.7±16.1	0.538
ASA score	1.7±0.7	1.8±0.7	0.543
BMI (kg/m^2)	26.7±4.6	26.7±3.3	0.966
Obstruction length (cm)	1.8±0.9	1.8±0.6	0.986
Internal urethrotomy number	2.4±3.5	2.0±3.8	0.586
Etiology			0.061
Iatrogenic	37 (50.7%)	15 (53.6%)	
Idiopathic	24 (32.9%)	13 (46.4%)	
Travmatic	12 (16.4%)	0	
Preoprerative Qmax (mL/sec)	5.7±3.7	4.8±3.4	0.267
Preoperative IIEF-5	16.7±4.9	17.1±5.9	0.837
Operation duration (min)	106.5±17.3	91.8±15.5	<0.001
Bleeding amount (mL)	191.6±56.7	147±61.1	1.001
Hospitalization duartion (day)	4.4±4.2	2.7±0.7	0.041
Catheter stay time	22.0±9.9	15.1±3.3	0.001
Success (n) (%)	62 (84.9%)	23 (82.1%)	0.765
Complication (n) (%)	9 (12.3%)	1 (3.6%)	0.276
Postoperative Qmax, 6th month (mL/sec)	19.8±3.6	19.5±4.9	0.793
Postoperative IIEF-5, 6th month	12.3±4.7	15.2±6.5	0.016
Follow-up duration (month)	52.3±36.3	16.8±6.5	<0.001

EPA: end-to end anastomosis; ASA: American Society of Anesthesiologists; BMI: body mass index; IIEF: International Index of Erectile Function

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

preoperative Qmax (mL/s) and International Index of Erectile Function (IIEF-5) scores. EPA was associated with a longer mean operative time than NTU (respectively, 106.5±17.3 min vs. 91.8±15.5 min, p≤0.001). NTU was associated with a lower bleeding volume, shorter hospitalization time, and shorter catheter indwelling time (respectively, 191.6±56.7 mL vs. 147±61.1 mL, p=0.00; 4.4±4.2 days vs. 2.7±0.7 days, p=0.041; 22.0±9.9 days vs. 15.1±3.3 days, p=0.001). Success was achieved in 62 EPA patients (84.7%) and 23 NTU patients (82.1%), with comparable rates between the two groups. Evaluations of the preservation of erectile function revealed significantly lower IIEF-5 scores in the EPA group at the 6th month (p=0.016).

Conclusion: In the treatment of short bulbar urethra strictures, NTU can produce success rates comparable to those obtained with EPA. NTU demonstrates clear advantages, such as a shorter hospitalization time, shorter catheter indwelling time, and a better preservation of sexual function. However, NTU patients must be selected carefully, and the procedure must be performed in experienced centers as the surgery is relatively novel, requires experience, and has restricted use in cases with traumatic etiology.

Keywords: Bulbar, erectile function, urethral stricture, urethroplasty, transection

SS-47 [Female Urology]

Iatrogenic endometriosis following the apical pelvic organ prolapse surgery

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Introduction: Iatrogenic endometriosis (IE) is the protruding of endometrial glands and stroma out of the uterus following certain surgical interventions. The rate of IE after gynecologic surgeries due to benign uterine disease is 1%-2%. Laparoscopic supracervical hysterectomy is also a part of a frequently used surgical treatment of apical pelvic organ prolapse, which is followed by sacrocervicopexy. However, to the best of our knowledge, there are no data about IE after apical prolapse surgery in the current literature. Herein, we present a case report of a patient diagnosed with *de novo* endometriosis 1 year after the laparoscopic supracervical hysterectomy and sacrocervicopexy (LASH).

Case presentation: A 46-year-old parous female patient who underwent LASH secondary to Grade 3 symptomatic apical prolapse 1 year before was admitted to the same clinic with pelvic pain, which started 6 months following surgery. Deep vaginal palpation was painful. Transvaginal ultrasonography revealed an area with hypervascularization on the sacral promontory. The patient was scheduled for diagnostic laparoscopy. A 2x2 cm solid, wine-colored hypervascular hemorrhagic lesion was seen on sacral promontory. The lesion and the peritoneal layer behind it were totally excised. The patient was discharged on the 1st postoperative day, without any complications. Pathologic examination revealed foci of endometriosis comprising endometrial glands and stroma within the connective tissue, along with hemosiderin-laden macrophages. The symptoms of the patient resolved after the surgery and no further adjuvant treatment was needed.

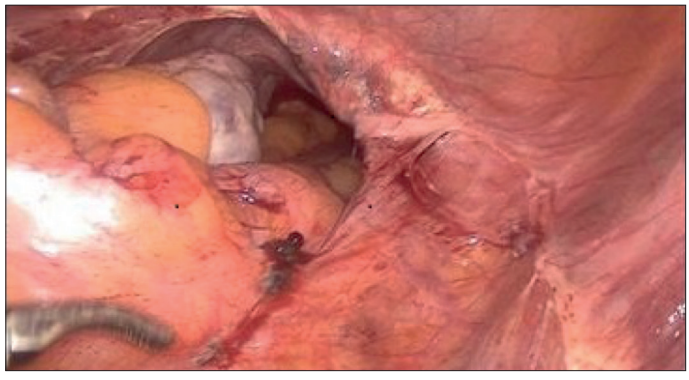

Figure 1. Endometriosis on sacral promontory

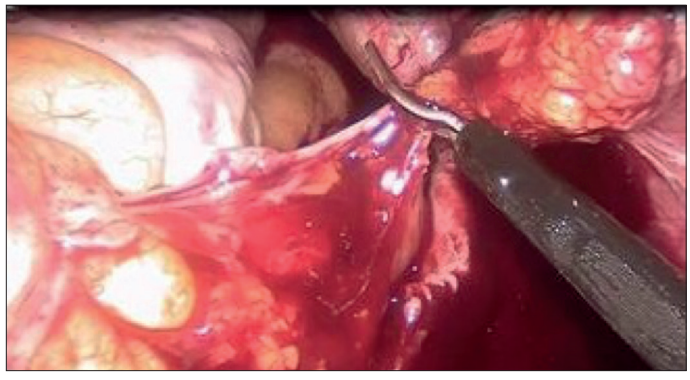

Figure 2. Excision of endometriosis with peritoneum

Conclusion: Although the rate of IE is low after LASH surgery, the possibility for the occurrence of IE should be discussed with patients diagnosed with apical prolapse to determine the type of surgical intervention. IE should be kept in mind for differential diagnosis, in case of pain after LASH surgery.

Keywords: Endometriosis, pelvic organ prolapse, laparoscopy

SS-48 [Experimental Urology: Andrology]

Efficacy of biofeedback-guided pelvic floor muscle training in lifelong premature ejaculation treatment

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Objective: In this study, we aimed to compare the efficacy and safety of biofeedback (BF)-guided pelvic floor muscle training (PFMT), including rehabilitation of pelvic floor muscles with a simulator used in the treatment of urinary incontinence (Group 1) with 30 mg dapoxetine (Group 2) and a combination of BF-guided PFMT and 30 mg dapoxetine (Group 3) in the treatment of premature ejaculation (PE), and to share the initial results.

Material and methods: The study was started after the approval by the Local Ethics Committee. The IELT and premature PEP values of the patients diagnosed with a lifelong PE were recorded before and at the 4th and 12th weeks of the treatment. The patients were divided into three groups using the sealed envelope method. Group 1 consisted of 14 patients, and Groups 2 and 3 consisted of 11 and 10 patients, respectively. Patients diagnosed with erectile dysfunction in the IIEF-5 questionnaire before the treatment were excluded from the study. None of the patients had musculoskeletal system pathology that could prevent the use of pelvic floor muscles. In addition, none of the patients included in the study had a history of any comorbid diseases or regular medication use. The aim of the BF-guided PFMT is to control the perineal region muscles and genitourinary sphincter by isometric contractions. The patients were given one-to-one BF-guided PFMT once a week for 3 sessions of 20 minutes each for a total of 60 minutes. The first evaluations were made at the end of the 4th week. The BF-guided PFMT was ended at the end of the 12th week, and the patients were re-evaluated with estimated IELT and PEP. The clinical success was accepted as >60 seconds of estimated IELT at 4th and 12th weeks. Patients with values <60 seconds Biofeedback-guided pelvic floor muscles training (Figure 1).

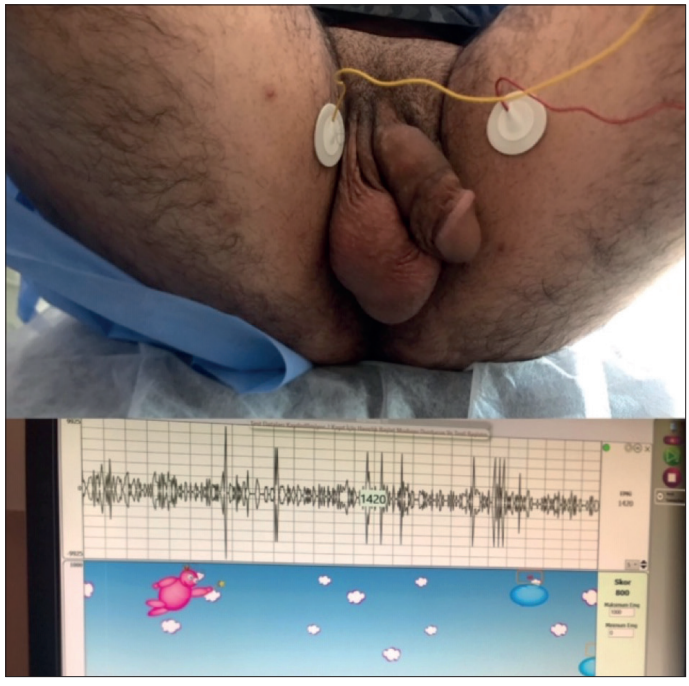

Figure 1. Biofeedback-guided pelvic floor muscles training

Results: The mean age of the patients was 28.3 (21-42) years. All patients in Group 1 completed the treatment protocol, and no adverse effects were observed. In Group 1, the mean estimated IELT time before the treatment was 42.2 seconds. The mean IELT times at the 4th week and 12th week were 86.4 and 114.1 seconds, respectively. Nine patients were regarded clinically successful. In Group 2, the mean estimated IELT time before the treatment was 48.8 seconds. The mean IELT times at the 4th week and 12th week were 136.4 and 174.2 seconds, respectively. Seven patients were regarded clinically successful. The treatment was terminated in 1 patient due to adverse effects. In Group 3, the mean estimated IELT time before the treatment was 45.1 seconds. The mean IELT times at the 4th week and 12th week were 166.3 and 216.4 seconds, respectively. Eight patients were regarded clinically successful. The treatment was terminated in 1 patient due to adverse effects.

Conclusion: The BF-guided PFMT can be considered as a good alternative to medical treatment options or a part of a combination treatment because of its ease of administration, good patient compliance, reasonable sustained efficacy, and lack of any adverse effects in PE treatment. The combination therapy may reduce the dose necessary for efficacy in

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

dapoxetine pharmacotherapy, which may reduce the cost and side-effects. We suggest that our study investigating the efficacy of BF-guided PFMT in the PE treatment may play a leading role, and prospective, controlled randomized studies conducted in a large series may contribute to the literature.

Keywords: Biofeedback, premature ejaculation, pelvic floor muscles

SS-50 [Operative Techniques: Reconstructive Techniques]

Metoidioplasty: Initially experience in Turkey

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Objective: Metoidioplasty is a technically difficult and challenging procedure for creating a neophallus from an enlarged clitoris in female transgenders. We aim to present our experience and satisfactory results on transgender patients who underwent gender-confirmation surgery.

Material and methods: From June 2018 to July 2019, metoidioplasty was performed in 5 patients (aged 26-42 years). The patients were treated hormonally for a mean of 14 (11-23) months before surgery and had undergone hysterectomy and adnexectomy through a vaginal approach before metoidioplasty. The vagina was also removed, except the part of the ventral vaginal wall close to the urethra that would be used for urethral lengthening. The clitoris was additionally enlarged using dihydrotestosterone as a topical gel locally. The patient was positioned in standard lithotomy. The clitoris was lengthened and straightened by division of clitoral ligaments and the short urethral plate. Urethroplasty was done with the buccal mucosa graft. Scrotum was created from labia majora in which two testicle prostheses were inserted.

Results: During the mean follow-up period of 7 (2-12) months, postoperatively all 5 patients achieved a mean penile length of 6.8 (4-8) cm. All patients were satisfied with their penile size and esthetic appearance. The complications were related to the urethroplasty, with 1 urethral stenoses and 1 fistula, and these patients were followed up without any problem after the additional intervention.

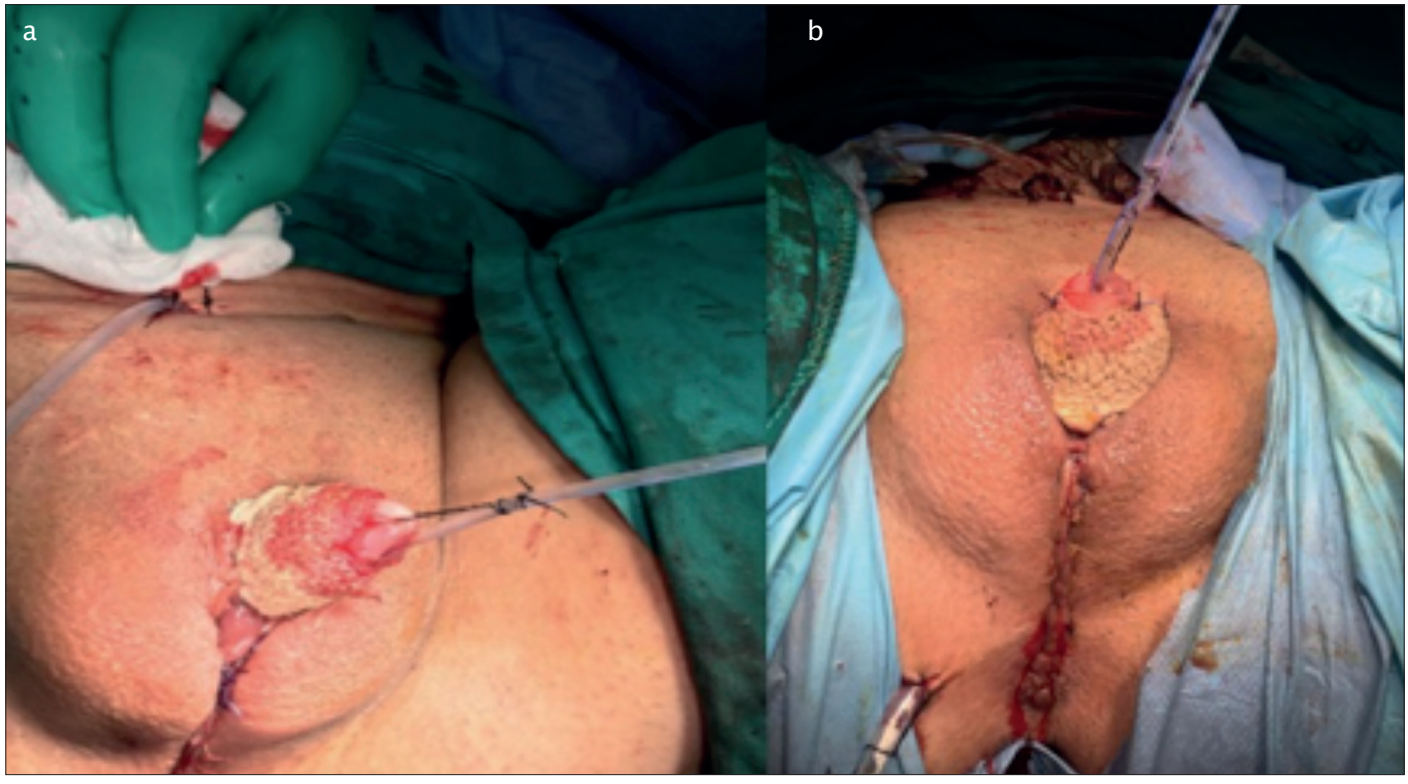

Figure 1. a, b. Aspect at the end of surgery

Conclusion: One-stage sex reassignment surgery in female transsexuals substitutes the penis by clitoral enlargement and urethral lengthening procedures. More reports are needed and more comparisons with the other results are necessary to validate and define the role of this type of surgery.

Keywords: Metoidioplasty, neophallus, transgender

SS-54 [BPH: Treatment (Medical-Surgery)]

Holmium Laser Enucleation of Prostate (HoLEP) for Surgical Treatment of Benign Prostate Hyperplasia (BPH): Experience of 488 Patients

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Objective: Holmium laser enucleation of the prostate (HoLEP) is a serious alternative to transurethral resection of the prostate (TURP), open prostatectomy, and other minimal invasive modalities. The interest for this surgery is increasing among the urologists. To the best of our knowledge, there are inadequate data and experience in our country. The aim of the present study was to evaluate our results of HoLEP in our first 488 cases.

Material and methods: Between July 2015 and February 2019, the records of first 488 cases of the HoLEP procedure were retrospectively reviewed. Patient characteristics, peak flow rates (Qmax), postvoiding residual urine volume (PVR), international prostate symptom score (IPSS), and quality-of-life scores (QoL) were recorded preoperative and on the 1st and 3rd months postoperatively.

Table 1. Pre and postoperative measures

Measures	Mean	Minimum	Maximum	p
Pre Qmax (mL/sc)	9.05	2.0	24	<0.005
Post Amax (mL/sc) 1st month	25.20	19.0	51.10	
Post Qmax (mL/sc) 3rd month	25.26	18.6	51.60	
Pre PVR (mL)	151.28	20	550	<0.005
Post PVR (mL) 1st month	24.65	2	53	
Post PVR (mL) 3rd month	17.65	0	45	
Pre IPSS	21.96	10	31	<0.005
Post IPSS 1st month	7.33	2	12	
Post IPSS 3rd month	5.93	1	10	
Pre QoL	4.99	3	6	<0.005
Post QoL 1st month	2	1	3	
Post QoL 3rd month	1.38	1	3	

Results: The preoperative mean age, body mass index, prostate volume, and PSA levels of the patients were 66.19 (47-85) years, 26 (20-33.2) kg/m^2, 101.83 (29-430) mL, and 4.96 (0.33-20) ng/mL, respectively. Table 1 shows pre- and postoperative measures. The mean preoperative Qmax, PVR, IPSS, and QoL results were 9.05 (2-24) mL/sec, 151.3 (20-550) mL, 21.96 (10-31), and 4.99 (3-6), respectively. The measured mean enucleation and morcellation time were 63-6 (19-172) and 12.2 (2-53) minutes, respectively. The mean total operative time recorded 71.7 (21-225) minutes. The hospital stay was 28.8 (20-78) hours, and the duration of urethral catheter was 26.4 (18-72) hours. The mean Qmax, PVR, IPSS, and QoL results in the 1st and 3rd postoperative months are shown in the Table 1.

Conclusion: As it is mentioned in the literature, we believe that the indications for HoLEP are irrespective of the prostate volume. Our inital results showed a similarity with the literature (Table 2). We believe that this, to the best of our knowledge, first HoLEP series from Turkey supports that whenever it becomes easy to reach the equipment for surgeons and patients, the HoLEP will replace the TURP, which is shown as the current gold standard, with its superior results as indicated in the literature.

Keywords: Benign prostatic hyperplasia, holmium laser, results, HoLEP

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Table 2. Comparison of the HoLEP results in the literature with our study

	Kuntz et al. 2004 (RCT)	Gilling et al. 2012 (RCT)	Montorsi et al. 2004 (RCT)	Gupta et al. 2004 (RCT)	Tunc et al. 2019
Procedure	**HoLEP**	**HoLEP**	**HoLEP**	**HoLEP**	**HoLEP**
Length of stay (day)	2.2	1.2	2.5	-	1.2
Catheter time (day)	1.1	0.7	1.3	1.2	1.1
Tissue removed (g)	32.6	40.4	36.1	17.2	62.1
Procedure time (min)	94.6	62.1	74	75.4	71.7
Change in Qmax	+20.2	+13.8	+16.9	+19.9	+16.21
Change in IPSS	–19.9	–18.4	–17.5	–18.2	–19.6

RCT: randomized controlled trial; Qmax: maximum urinary flow rate; IPSS: international prostate symptom score

SS-55 [Female Urology]

Focal and diffuse vascularization are newly defined cystoscopic findings and relationship between intravesical therapy response in bladder pain syndrome

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Objective: Several studies that failed to find a relationship between symptom reports and cystoscopic findings were performed with patients undergoing intravesical thearpy for BPS/IC. In this study, we investigated the relationship between cystoscopic findings and the intravesical therapy response in patients with BPS/IC.

Material and methods: We retrospectively investigated our institutional records for all patients undergoing cystoscopy and our institutional experience with hydrodistention and early started intravesical combined therapy (ICT) (chondroitin sulfate and hyaluronic acid). After hydrodistention, all patients received ICT in the first 2 hours. In addition, ICT was continued weekly in 8 weeks, 2 times in followed month and then monthly throughout 7 months (17 times in total). Cystoscopic findings were noted as glomerulations, focal or diffuse vascularization with or without glomerulation and Hunner's lesion (HL). The therapy responses were evaluated with the visual analoque scale (VAS), O´Leary/Sant interstitial cystitis symptom index (ICSI), and interstitial cystitis problem index (ICPI) scores. The relationship between cystoscopic findings and intravesical therapy response were evaluated in 1, 3, 6, and 12 months, respectively.

Results: There were 55 patients identified as having bladder pain syndrome/interstitial cystitis followed. In this group, there were 34 patients who underwent hydrodistention and started ICT early. HL were observed during cystoscopy in 4 (11.8%) of those patients. Glomerulations were seen during cystoscopy in 15 (44.1%) of those patients. Vascularization was seen during cystoscopy in 13 (38.2%) of those patients. In 2 patients (5.8%), there were no pathological findings. Twenty-six patients' in 3.month, 16 patients in 6. Month and 12 patients' follow up was fulfilled in 12. Month. The mean VAS, ICSI, and ICPI scores were decreased in the glomerulations group at the total follow-up (Table 1). However, 9 of 13 patients (70%) with only vascularization had no response to intravesical therapy. Four of the 13 patients had vascularization and additionally glomerulation, and those patients had a good treatment response.

Conclusion: Focal or diffuse vascularization are overlooked cystoscopic findings in BPS/IC. The presence of vascularization has been associated with more severe symptoms and a decreased ICT response. Patients with glomerulations as cystoscopy findings, might be good candidates for intravesical therapy started early.

Keywords: Bladder pain syndrome, chondroitin sulfate, glomerulation, hyaluronic acid, vascularization

Table 1. Relationship between cystoscopic findings and treatment response

	Before treatment	1. Mo	3. Mo	6. Mo	12. Mo	p	
VAS (ave)	81.2	33.3	31.9	39.4	46.7	<0.05*	
No findings	85	5	25	30		0.18	
Glomerulations	85.4	35	35.8	43.3	55	0.03	0.03-0.03-0.07-0.14***
Focal vascularization	100	75	75	50		0.32	
Diffuse vascularization	91.7	40	43.3	25		0.07	
Vascularization+Glomerulations	65	40	3.3	30		0.11	
Hunner lesion	70	6.7	20	40	36.6	0.11	
ICSI (ave)	15.7	9.9	9.9	8.1	12.2	0.00	0.00-0.00-0.00
No findings	13.5	6.5	4	2		0.18	
Glomerulations	15.5	9.3	9.9	7.1	11.3	0.002	0.002-0.005-0.02
Focal vascularization	18	10	8	5		0.18	
Diffuse vascularization	17.8	12.2	14	10		0.07	
Vascularization+Glomerulations	14	13.5	11.7	10		0.31	
Hunner lesion	14.5	8.3	9	14	14	0.11	
ICSI (ave)	13.1	8.4	8.4	7.1	9.8	0.00	
No findings	11	6.5	3.5	2		0.18	0.00-0.00-0.00
Glomerulations	13.7	7.9	9.1	6.3	10.5	0.00	
Focal vascularization	15.7	9	8	7		0.18	0.00-0.00-0.01
Diffuse vascularization	12.8	9.8	13.3	8.5		0.11	
Vascularization+Glomerulations	11	11	8	8		0.32	
Hunner lesion	13.7	7	7.3	10.5	9.7	0.11	

*VAS score:
1.Month vs before treatment p=0.00
3.Month vs before treatment p=0.00
6.Month vs before treatment p=0.005
12.Month vs before treatment p=0.015
**When groups were splitted in 12.Month responses, in some groups, mean scores could not be computed because of little number of patients
***Stands for 1.Month vs before treatment. 3.Month vs before treatment. 6.Month vs before treatment. 12.Month vs before treatment

SS-57 [Prostate Cancer: Localized Disease Treatment]

Long-term results for active surveillance protocol: Is the total core involvement rate or serum prostate-specific antigen density suitable for follow-up? Which one is better to estimate additional treatment requirement? 15-year experience

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Objective: In this study, we aimed to determine the predictive factor for additional treatment requirements in active surveillance (AS) for patients with low or very low-risk prostate cancer, and we investigated the effect of tumor burden by the total core involvement rate in biopsy to predict of need for additional treatment.

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Material and methods: A total of 107 patients with prostate cancer in AS between June 2005 and January 2018 have been evaluated retrospectively. Groups were divided into two according to the need for additional treatment. Group 1 received additional treatment, and Group 2 did not receive additional treatments, and AS was continued. Patient's age, prostate volumes, total prostate-specific antigen, prostate-specific antigen density in biopsy, total core involvement count, quantity and rate, pathology results, and the follow-up period were recorded and compared in the two groups.

Results: The mean age at diagnosis was 63.01 years (range, 47-74 years). The mean PSA values at diagnosis were 6.09 ng/mL and 5.2 ng/mL in Groups 1 and 2, respectively. The mean follow-up period was 38.1 months (range, 12 to 134 months). Only the PSA-density measurement significantly predicted the need for additional treatment (p=0.017). The ROC analysis showed that the optimal threshold was 0.13 ng/mL/cc (sensitivity, 70.8%; specificity, 57.1%). Additional treatment requirements were not detected in patients with the PSA-Density cutoff value <0.07 ng/mL/cc. The average follow-up time until the radical prostatectomy was 25.47 months (range, 12-60 months).

Conclusion: AS is currently reserved for selected low or very low-risk patients. The decision to start definitive treatment cannot be currently predicted in the initial biopsy. The total tumor burden of less than 5% is safe for patients with low or very low risk of prostate cancer in AS. Prostate-specific antigen density can predict the need for additional treatment in patients managed by AS and may shed some light on the future.

Keywords: Prostate cancer, active surveillance, PSA density, definitive treatment

Table 1. Patients with or without additional treatment requirement (surgical or medical)

Variable	Additional treatment n=24 Mean±SD (Min-Max)	No additional treatment n=83 Mean±SD (Min-Max)	p
Age (years)	63.92±5.79 (57-74)	62.76±5.84 (47-74)	0.74
Prostate Volume (mL)	40.5±12.16 (15-70)	43.95±19.45 (10-114)	0.72
tPSA (ng/mL)	6.09±1.83 (3.36-9.47)	5.2±2.02 (1.24-10)	0.7
PSA Density (ng/mL/cc)	0.16±0.06 (0.07-0.28)	0.14±0.12 (0.03-0.83)	0.0017
TCIC (n)	1.16±0.38 (1-2)	1.19±0.39 (1-2)	0.79
TCIQ (mm)	1.88±1.36 (1-6)	1.96±1.34 (0.1-7)	0.64
TCIR (%)	15.56±11.93 (5-50)	15.31±12.81 (0.55-50)	0.75

Evaluation of descriptive characteristics according to the patients with or without additional treatment requirement (surgical or medical). SD: standard deviation; TCIC: total core involvement count; TCIQ: total core involvement quantity; TCIR: total core involvement rate. *p<0.05

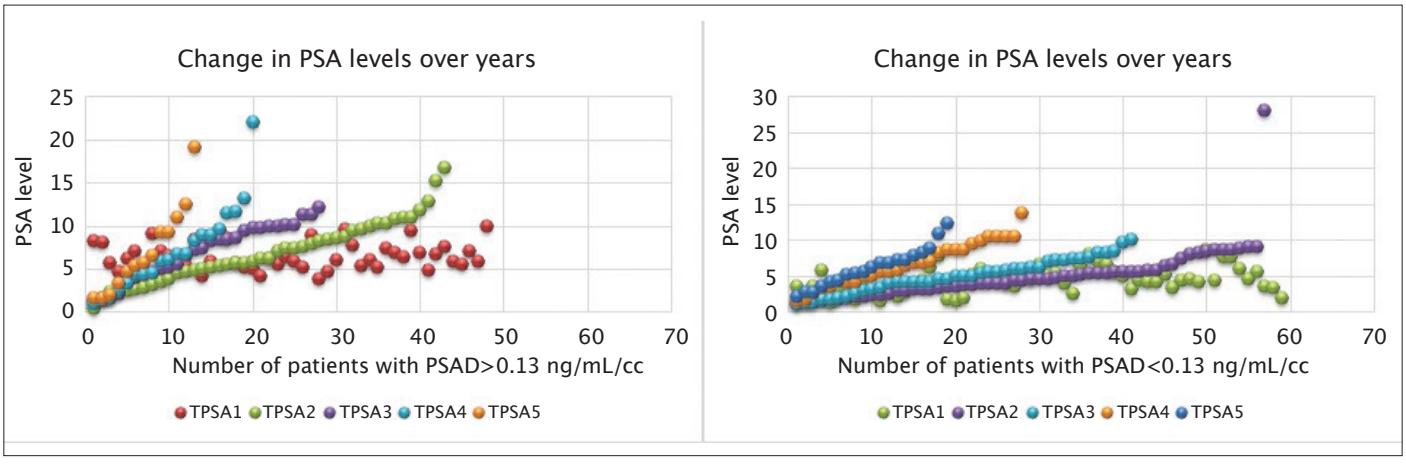

Figure 1. Patients with prostate cancer managed by active surveillance. Annual changes of PSA levels during the follow-up according to patients with the PSA-Density >0.13 or 0.13≤ ng/mL/cc

SS-58 [Adrenal-Testicular Tumors: Treatment]

Germ cell tumors, 195 cases: 30-year experience with testicular cancer

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Objective: In this study, we aimed to share our experiences about patients with testicular tumors. We report the demographic and clinical characteristics and the long-term results in patients with testicular tumors.

Material and methods: A total of 195 testicular cancer patients were enrolled in the study. Patients whose data were obtained were are included into the study. Patient's age, initial complaints, scrotal localization of symptoms, clinical examination findings, serum tumor marker levels, tumor volumes, the absence or presence of metastasis, pathology results, additional treatments, and follow-up period were recorded.

Results: Histologically, 88.63% of patients had germ cell cancers, with seminoma accounting for 36.87% of cases. The mean age at presentation in patients with seminoma was 30.43 years, and in patients with non-seminomatous tumors was 24.18 years. The right testis was involved in 56.41% of cases. Testicular swelling was the main complaint in 61 (31.28%) patients. Of the patients, 32.3% were smokers or tobacco users. A history of cryptorchidism was reported in 9 (4.61%) patients. A family history of testicular cancer was reported in 7 (3.58%) patients. Preoperative alpha-fetoprotein (AFP) and β-human chorionic gonadotrophin (β-HCG) and lactate dehydrogenase (LDH) levels in seminoma were 21.3 ng/mL, 98.87 mIU/mL, and 503.08 U/L, respectively. In patients with non-seminomatous tumors, they were 1341.59 ng/mL, 1878.25 mIU/mL, and 469.17 U/L, respectively. The mean scrotal mass lesion at diagnosis in patients with seminoma and non-seminomatous tumor was 40.94 and 39.78 mm3, respectively. Adjuvant chemotherapy and radiotherapy were applied in 99 (50.76%) and 19 (9.74%) patients, respectively. The retroperitoneal lymph node dissection was performed in 24 (12.3%) patients. The mean follow-up period was 40.83 and 51.69 months in seminoma and non-seminomas. The recurrance rate in patients with seminoma and non-seminomatous tumor was 5.66% and 8.45%, respectively. Three patients (1.53%) died during the follow-up.

Conclusion: Testicular germ cell tumors may appear at any age. The multimodal treatment of testicular cancer depends on the clinical stage and histological diagnosis. Surgical treatment should be aggressive, and additional specific treatment according to the pathology result should be planned without delay. The follow-up protocols are recommended to be tumor specific. For these reasons, the diagnosis and treatment of testicular cancer should be performed by specialist clinics.

Keywords: Testicular cancer, testis tumors, germ cell tumor

SS-63 [Other]

Can vaginal dryness and orgasm problems in the sexual partner be a reason for the development of penile fracture?

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Objective: Penile fracture (PF) is a rare urological trauma. It is defined as the rupture of the tunica albuginea of the corpus cavernosum by blunt trauma to the rigid or semi-rigid penis. In a study, sexual activity, especially sexual intercourse, was shown to be the most common cause of PF. In this study, it was found that injuries were more common in the man-on-top and doggy-style positions. These positions have been shown to be associated with the bilateral corpus cavernosum fracture and urethral lesions. The most common sexual difficulties in the middle-aged women are the loss of sexual interest, inability to relax, dyspareunia, difficulty in arousal, and no orgasm. Approximately 10%-15% of perimenopausal women reported lack of sexual desire, and less than 5% reported lack of orgasm. When examining the causes of dysparonia, the vaginal dryness, vaginismus, vestibulitis, and vulvodynia should be evaluated. In this study, we aimed to investigate the effect of vaginal dryness and orgasm problems on the development of PF.

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Table 1. FSFI subscale and total scale scores of control and penile fracture groups

	Control group (n=30)	Study group (n=30)	p †
Desire	4.04±1.29 (1.8-6.0)	4.08±1.22 (1.2-6.0)	0.893
Arousal	3.76±1.29 (1.2-5.7)	3.71±1.13 (1.2-5.4)	0.935
Lubrication	4.07±1.43 (1.2-6.0)	2.72±1.11 (1.2-5.1)	<0.001
Orgasm	4.21±1.48 (1.2-6.0)	1.67±0.78 (1.2-3.6)	<0.001
Satisfaction	4.48±1.35 (1.2-6.0)	2.37±0.89 (1.2-5.6)	<0.001
Pain	3.53±1.49 (1.2-6.0)	2.27±1.02 (1.2-4.8)	<0.001
Total	24.10±7.79 (7.8-35.1)	16.82±5.19 (7.6-28.3)	<0.001

Data expressed as mean±standard deviation (minimum-maximum), †Mann-Whitney U test.

Material and methods: This study was divided into two groups: the study group (Group 1) and the control group (Group 2). Group 1 consisted of the partners of patients who underwent surgical treatment for PF in our clinic between 2007and 2018. Group 2 was randomly selected among female patients who applied to the urology clinic. Group 1 consisted of 30 subjects whose partners developed PF, and Group 2 contained 30 subjects who had no previous history of PF. The time of inclusion of the women in the Group 1 was determined as their partners completed the surgical treatment in the clinic and applied to the outpatient clinic for control. The age, marital status, and educational status of the women in both groups were examined. All women in Group 1 and Group 2 were evaluated using the Female Sexual Function Scale (FSFI). Groups were evaluated by comparing individual and overall total scores for all the questions available in FSFI.

Results: Between the control and PF groups, there was no statistically significant difference between the partners' ages, educational status, average marriage duration, and working status of the partners (p>0.05). Between the control and PF groups, while there was no statistically significant difference in desire and arousal subscale scores (p=0.893, p=0.935), lubrication, orgasm, satisfaction, and pain-subscale scores were significantly lower in the PF group than the control group (p<0.001). Each 1-point decrease in the FSFI lubrication subscale-score increased the probability of PF 2.221-fold (95% confidence interval [CI]= 1.389-3.552; p<0.001). As the FSFI orgasm subscale scores decreased, the probability of PF increased statistically (OR=7.333, 95% CI=2.666-20.166; p<0.001). Each 1-point decrease in the FSFI satisfaction subscale score significantly increased the probability of PF to be 5.946 times (95% CI=2.198-16.087, p<0.001). As the FSFI pain-subscale scores decreased, the probability of PF increased statistically (OR=2.218; 95% CI=1.350-3.644; p=0.002). As the FSFI total scale scores decreased, the probability of PF increased statistically (OR=1.177, 95% CI=1.071-1.294, p<0.001).

Conclusion: Vaginal dryness, orgasmic disorders, and dyspareunia are among the factors that may increase the risk of PF in sexual partner. Although women may feel uncomfortable in communicating sexual problems such as vaginal dryness and pain during sexual intercourse, it is predicted that the detection and treatment of female sexual dysfunction will reduce the risk of developing PF.

Keywords: Dyspareunia, penile fracture, vaginal dryness

SS-67 [Andrology Infertility: Diagnosis]

Relation between premature ejaculation and lower urinary tract symptoms in adult men

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Objective: Lower urinary tract symptoms (LUTS) and premature ejaculation (PE) are common health problems. The etiology of LUTS is explained more clearly than premature ejaculation, and various treatment algorithms have been designed. In our study, the relation between these two conditions was examined in adult patients.

Material and methods: Thirty patients admitted to our outpatient clinic with PE were included in the study. The presence of PE, t-PSA value, International Prostate Symptom Score Assessment Questionnaire (IPSS) score, total testosterone level, FSH, LH, prolactin, and TSH levels were evaluated. The presence

of LUTS in these patients was determined by IPSS. The premature ejaculation evaluation questionnaire (PEDT) was applied to patients with PE. Patients with IPSS scores ≥8 were considered LUTS +. Those with a PEDT score ≥11 were considered PE. Statistical significance was set at $p<0.05$.

Results: PE and LUTS were observed in 19 patients. In patients with PE+LUTS, the mean age was 51.3±7, the mean PSA value was 2.9±0.9 ng/mL, the testosterone value was 5.5±1.6 ng/mL, the mean FSH values were 7.03±3.01 mIU/mL, the mean LH value was 5.2±1.9 mIU/mL, and the mean TSH value was 2.5±1.2. The mean age of the patients with PE was 47±4.4, the mean PSA value was 2.6±1.3 ng/mL, the testosterone value was 5.0±1.9 ng/mL, the mean FSH values were 8.1±2.4 mIU/mL, the mean LH value was 7.2±2.9 mIU/mL, and the mean TSH value was 2.2±1.07. There was no statistically significant difference between these values. The PEDT value was 17±2.5 in patients with PE+LUTS, and 14.2±2.5 in the PE group. The mean IPSS score in patients with PE+LUTS was 16.7±3.7. The mean IPSS score in the PE group was 7.9±3.2. The difference between the IPSS and PEDT values between the two groups was statistically significant ($p<0.05$). PEDT and IPSS scores were higher in patients with LUTS+PE than non-LUTS.

Conclusion: The PEDT values are higher in adult male patients presenting with PE in the presence of accompanying LUTS. LUTS should be questioned in patients presenting with PE. Treatment of LUTS may reduce the severity of PE.

Keywords: Lower urinary tract symptoms, sexual dysfunction, premature ejaculation

SS-68 [Endourology (Non-stone) Treatment]

Laparoscopic ureterolithotomy-the preferred approach: Transperitoneal or retroperitoneal?

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Objective: In this study, we aimed to compare laparoscopic transperitoneal and retroperitoneal ureterolithotomy approaches and to identify which technique is superior to the other.

Material and methods: We retrospectively reviewed 45 patients with proximal large and impacted ureteral stones who underwent transperitoneal and retroperitoneal laparoscopic ureterolitotomy between January 2012 and December 2017. The transperitoneal and retroperitoneal procedures were grouped as Group 1 and 2, respectively. Groups were compared according to the preoperative, intraoperative, and postoperative clinical data.

Results: There were 25 patients in Group 1 and 20 patients in Group 2. The mean age was 47.6±15.7 years (range, 23-73) in Group 1, and 44.45±16.83 years (range, 18-71) in Group 2. In Group 1, 72% (n=18) were males, and 28% (n=7) were females, while in Group 2, 70% (n=14) were males, and 30% (n=6) were females. The mean stone sizes was in Group 1 and Group 2, 18.22±1.36 mm and 18.21±1.56 mm, respectively. In Group 1, 56% (n=14) of the stones were in the right side, and 44% (n=11) were in the left side, while in Group 2, 50% (n=10) were in the right side, and 50% (n=10) in the left side. The mean body mass index was 25.588±1.13 kg/m^2 in Group 1 and 26.315±3.34 kg/m^2 in Group 2. In Group 2, the operation time was statistically shorter ($p=0.022$). In Group 1, the visual analog scale was statistically higher ($p<0.05$).
Sarılar
Conclusion: Compared to those achieved by transperitoneal approach, the retroperitoneal approach, for large and impacted proximal ureteral stones, has a significantly shorter operation time and lesser pain postoperatively. Further prospective, randomized, and controlled studies on large samples are required.

Keywords: Laparoscopy, retroperitoneal, transperitoneal, ureterolithotomy

SS-69 [Operative Techniques: Laparoscopic and Robotic Urology]

Comparison of open and laparoscopic radical nephrectomy results in renal tumors >7 cm

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Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Objective: The aim of this study was to compare open and laparoscopic techniques in radical nephrectomy performed in patients with renal tumors >7 cm.

Material and methods: The data of open and laparoscopic radical nephrectomy cases performed between November 2015 and October 2018 in our clinic were analyzed retrospectively. Patients with renal tumors >7 cm were included in the study. The patients were divided into two groups as 40 patients who underwent the open technique and 26 patients who underwent the laparoscopic technique. Demographic characteristics of the patients, tumor characteristics, preoperative, and postoperative data were compared.

Results: Demographic data of patients and tumor characteristics are presented in Table 1. Preoperative and postoperative hemoglobin (hb) and creatine values of the patients were examined, and their differences were obtained. The decrease in hb was 3.4±0.7 g/dL in open surgery and 1.4±0.4 g/dL in laparoscopic surgery (p=0.031). The duration of hospitalization was compared, and it was found to be statistically significant in favor of laparoscopy (p<0.05). When the groups were compared in terms of operation time, it was found to be lower in the open surgery group (0.014). When the postoperative complications were evaluated, open-technique complication rates were found to be high, but no statistically significant difference was found.

Conclusion: Radical nephrectomy can be successfully performed open and laparoscopically in large renal tumor surgery. Laparoscopic technique comes to the fore with less postoperative hb decrease and shorter hospital stay. The long operation time of the laparoscopic technique is seen as a disadvantage.

Keywords: Complications, laparoscopy, radical nephrectomy, renal cell carcinoma

Table 1. The demographic properties of the patients and tumor characteristics

	Open 7 cm n=40	Laproscopic >7 cm n=26	p
Age	59.4±12.8	51.7±9.7	0.242
Gender (M/F)	33/7	14/12	0.129
BMI	26.2±5.4	27.5±4.6	0.574
ASA score	1.7±0.7	1.5±0.5	0.115
Tumor size (mm)	93.6±22.7	85.3±16.7	0.384
Tumor localization			0.105
Lower pole	18	10	
Middle pole	6	6	
Upper pole	16	10	
Direction of the tumor (right/left)	21/19	12/14	0.566
Presence of preoperative metastasis	7	2	

BMI: body mass index; ASA: american Society of Anesthesiologists

Table 2. Postoperative data

	Open 7 cm n=40	Laproscopic >7 cm n=26	p
Creatine increase (mg/dL)	0.3±0.5	0.3±0.4	0.905
Hemoglobin decrease (g/dL)	3.4±0.7	1.4±0.4	0.031
Operation duration	142.4±22.6	192±42.1	0.014
Hospitalization (day)	5.4±2.7	4±1.1	<0.05
Complication (within 3 months)	12	5	0.241
Comlication			
Transfusion	5	2	
Prolonged ileus	2	0	
Wound opening	1	0	
Atelectasis	2	1	
Fever	2	2	

SS-71 [Prostate Cancer: Localized Disease Treatment]

Radical retropubic prostatectomy in high-risk prostate cancer patients: A single-center experience with 105 patients

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Objective: In this study, we aimed to present our radical retropubic prostatectomy (RRP) outcomes in high-risk prostate cancer (pCa) patients.

Material and methods: Data of patients undergoing RRP for pCa at our clinic between January 2012 and May 2019 were evaluated retrospectively. We included high-risk (PSA>20 ng/mL or cT2c or Gleason score >7) pCa patients according to the EAU risk groups to the study.

Results: All demographics and pathological data were shown in Table 1. Intraoperative complications were observed in 6 (5.7%) patients (external iliac artery injury in 1 patient, rectal injury in 2 patients, obturator nerve injury in 3 patients). Postoperative complications were observed in 5 (4.7%) patients (lymphocele in 3 patients, uretho-rectal fistula formation in 1 patients, pelvic hematoma in 1 patient). Adjuvant HT, RT, and HT with RT were needed in 14 (13.3%), 12 (11.4%), and 36 (34.2%) patients, respectively. Our median follow-up was 39 months. Disease specific and overall mortality rates were 1.9% and 5.7%, respectively.

Conclusion: Despite a low number of patients and low follow-up period, our outcomes suggest that RRP can be safely applied in patients with high-risk pCa, and it provided low mortality rates. However, patients should be informed that additional treatment (HT and RT) may be required after RRP.

Keywords: High risk, multimodal treatment, prostate cancer, radical prostatectomy

Table 1. Demographics and pathological data of all patients

Variables	n=105
Age (year), Mean±SD	61.2±7
Total PSA (ng/mL), Mean±SD	17.3±4
Prostate volume at surgical specimen (gr), Mean±SD	58±28
Number of positive biopsy cores, Mean±SD	4.6±2.1
Comorbidity status, n (%)	
No	68 (64.8)
Yes (At least one comorbidity)	37 (35.2)
GS at biopsy, n (%)	
ISUP grade I	12 (11.4)
ISUP grade II	17 (16.2)
ISUP grade III	22 (21)
ISUP grade IV	31 (29.5)
ISUP grade V	23 (21.9)
GS at surgical specimen, n (%)	
ISUP grade I	8 (7.6)
ISUP grade II	16 (15.2)
ISUP grade III	22 (20.9)
ISUP grade IV	34 (32.4)
ISUP grade V	25 (23.9)
Pathological stage, n (%)	
pT2a	6 (5.7)
pT2b	11 (10.4)
pT2c	26 (24.7)
pT3a	44 (42)
pT3b	16 (15.3)
pT4	2 (1.9)
Pathological lymph node	
No	91 (86.6)
Yes	14 (13.4)
SMP, n (%)	18 (17.1)
BCR, n (%)	20 (19)
Disease specific mortality, n (%)	2 (1.9)
Overall mortality, n (%)	6 (5.7)

BCR: Biochemical recurrence; ISUP: International Society of Urological Pathology; GS: Gleason score; PSA: Prostate specific antigen; SMP: Surgical margin positivity

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

SS-72 [Prostate Cancer: Diagnosis]

Our fusion prostate biopsy results in patients with PSA < 10 ng/ml and PI-RADS 1 or 2 lesion

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Objective: Magnetic resonance imaging-ultrasonography (MRI-US) fusion prostate biopsy (FPB) is the one of the biopsy methods defined for multiparametric prostate MRI (mpMRI) targeted biopsy. According to the prostate imaging and Reporting and Data System version 2 (PI-RADS), lesions with PI-RADS Score of 4 and 5 have a high risk of cancer, while the probability of malignancy in PI-RADS 1 and 2 lesions is considered to be fairly low, and usually clinical follow-up is recommended instead of biopsy in patients with a previous negative biopsy history. In this study, we aimed to present the FBP results of patients with PI-RADS 1 and 2 lesion, but who had a strong clinical suspicion of prostate cancer.

Material and methods: Patients with the PI-RADS Score of 1 or with 2 lesions on mpMRI but who had clinical suspicion of prostate cancer (rising PSA or abnormal digital rectal examination findings), and who underwent FPB between December 2016 and May 2016, were included to this study. The MRI-US US platform with a rigid image registry system was used for FBP. The 2-5-core targeted biopsy (TB) was taken from suspected lesions, and the then 12-core standard prostate biopsy (SPB) was taken. Demographic data such as age, body mass index, and some clinical data such as the PSA levels and histopathological examination results were analyzed. C/The cancer detection rate of TB+SPB was calculated. Data are expressed as the mean±standard deviation or median (25^{th}-75^{th} percentile) according to their distribution characteristics. The Mann-Whitney U test, chi-squared test, and Student's t-test were used to compare categorical and numerical data of the individual variables. The p-value of <0.05 was considered statistically significant.

Results: A total of 76 patients were included in the study, including 26 patients with the PI-RADS 1 lesion and 49 patients with PI-RADS 2 lesions. The mean age of patients included in the study was 63.55±6.98 years, whereas the median PSA values were 7.33 (5.28-9.23) ng/mL. Clinically significant cancer detection rates were 7.4% and 12.2%, respectively, for PI-RADS 1 and 2 lesions (p=0.704). According to PI-RADS scores, the comparison of clinical and demographic data of patients is summarized in Table 1.

Table 1. Some demographic-clinical data and comparison of some values according to PI-RADS scores

Parameter	All patients (n=76)	PI-RADS 1 (n=27)	PI-RADS 2 (n=49)	P (PI-RADS 1 vs PI-RADS 2)
Age (years)	63.55±6.98	65.74±6.72	62.85±6.88	0.055
Body mass index (kg/m^2)	27.53±3.90	27.01±3.65	27.82±3.96	0.078
PSA (ng/mL)	7.33 (5.28-9.23)	7.40 (4.88-9.40)	7.97 (5.91-9.40)	0.720
Prostate volume (mm^3)	66.13 (49.53-93.58)	64.16 (48.75-91.25)	67.61 (50.16- 94.31)	0.082
Aneshtesia applied during FBP (n, %)				
Sedoanalgesia	24, 31.6%	10, (37.0%)	14 (28.6%)	
Local	52, 68.4%	17, (63.0%)	35 (71.4%)	
Clinically significant cancer detection rate	8/76 (10.5%)	2/27 (7.4%)	6/49 (12.2%)	0.704
ISUP grade (n, %)				
1	5 (62.5%)	1 (50.0%)	4 (66.6%)	
2	2 (25%)	1 (50.0%)	1 (16.7%)	
3	1 (12.5%)	0	1 (16.7%)	
4	0	0	0	
5	0	0	0	

Conclusion: According to our results, clinically significant prostate cancer incidence was detected in the PI-RADS 1 and 2 lesions in approximately 10%. Although the difference was not statistically significant, there was some higher incidence of cancer in PI-RADS 2 lesions than PI-RADS 1 lesions.

Keywords: Fusion, prostate, PI-RADS

SS-74 [Operative Techniques: Laparoscopic and Robotic Urology]

Our laparoscopic radical cystectomy experiences

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Objective: Radical cystectomy and lymph node dissection is the gold standard in the treatment of muscle invasive bladder cancer. Laparoscopic surgery is widely used in urology as in other surgical branches. The treatment of major operations such as radical cystectomy with minimally invasive approaches is one of the current trends. Herein, we present the data of patients who underwent laparoscopic cystectomy in our clinic for invasive bladder tumor.

Material and methods: Data of 15 patients who underwent laparoscopic radical cystectomy+lymph node dissection in our clinic between January 2018 and August 2019 were reviewed retrospectively. Perioperative/postoperative data and oncologic results of patients were evaluated.

Results: In total, 15 patients underwent laparoscopic radical cystectomy lymph node dissection extracorporeal urinary diversion. Two of the patients were female, and 13 were male. The mean age of the patients was 61.3 years. The mean total operation time was 325 minutes, and the mean time for laparoscopic radical cystectomy and lymph node dissection was 125 minutes. The mean peroperative blood loss was 320 cc. The mean postoperative hospitalization was 9.5 days. None of the patients required open surgery during laparoscopy. Eight patients underwent Bricker, 4 patients underwent Wallace, and 3 patients underwent modified Bricker urinary diversion procedures. The nasogastric catheter was removed in an average of 2.2 days, and the drain was removed in an average of 6 days. Prolonged paralytic ileus occurred in 1 patient after surgery and was treated conservatively. Perioperative minimal rectal injury occurred in 1 patient. Rectal injury was primary repaired laparoscopically. One of the patients with the T4 stage had the invasion of the prostatic stroma, and the apex surgical margin was reported positive. The mean number of dissected lymph nodes was 12.1. There were 2 patients with the lymph node metastasis. According to the histopathological examination, organ-limited disease was found in 7 patients and extravesical disease (T3-T4) in 8 patients. Final pathologies were reported as squamous cell carcinoma in 2 patients and invasive transitional cell carcinoma in 13 patients.

Conclusion: According to our clinical experiences, radical cystectomy operations can be performed safely using laparoscopic methods in accordance with oncological principles.

Keywords: Laparoscopy, radical cystectomy, bladder cancer

SS-78 [Operative Techniques (video): Oncology]

Outcomes of perineoscopic radical prostatectomy

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Objective: To present the results of perineoscopic radical prostatectomy that we used in the surgical treatment of prostate cancer.

Material and methods: All consecutive 29 patients who underwent perineoscopic radical prostatectomy in our clinic between March 2018 and April 2019 were included in the study. Preoperative demographic data, preoperative and postoperative pathological results, complications and postoperative oncological and functional data were analyzed. Perineoscopic surgery defined by us is the visualization of the perineal surgical site with the tools used in laparoscopy and all operations of the surgeon are performed by looking at the screen.

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

Results: The mean age of the patients and the mean body mass index was 62.1±6.1 and 30.7±2.2 kg/m^2, respectively. Thirteen (44.8%) patients had a history of abdominal surgery, and 4 (13.7%) patients were Grade 3 according to the American Society of Anesthesiologists (ASA). The mean preoperative prostate-specific antigen (PSA) was 7.8±3.6 ng/mL, and the mean prostate volume was 42.6±13.1 cc. Preoperative data of the patients are summarized in Table 1. The mean total operative time and vesicourethral anastomosis time were 134.7±11.8 min and 36.3±6 min, respectively. The mean hospital stay and mean urethral catheter removal time was 2.7±0.6 days and 8.5±0.9 days, respectively. Based on the Clavien-Dindo classification, Grade 1 and Grade 2 complications occurred in 3 patients (10.3%) and 1 patient (3.4%), respectively, and they were treated successfully. Biochemical recurrence was detected in 2 patients (6.8%). Intraoperative and postoperative data are reported in Tables 2 and 3.

Conclusion: Perineoskopic radical prostatectomy is a feasible approach in oncological and functional aspects. However, to be able to reach more certain results, prospective randomized studies including long-term results and comparisons with other techniques in a larger patient series are required.

Keywords: Radical prostatectomy, perineoscopic, new technique, optical magnification

Table 1. The demographic properties of the patients

Average age (year±SD)	62.1±6.1
Average BMI (kg/m^2)	30.7±2.2
Abdominal surgery history, n (%)	13 (44.8)
ASA score	
I	12 (41.3)
II	13 (44.8)
III	4 (13.7)
Prostate volume (cc±SD)	42.6±13.1
PSA value before operation (ng/mL±SD)	7.8±3.6
Average IIEF score before operation	16±5
Multiparametric MR PIRADS SCORE, n (%)	
PIRADS 2	2 (6.8)
PIRADS 3	7 (24.1)
PIRADS 4	17 (58.6)
PIRADS 5	3 (10.3)
Gleason score before operation, n (%)	
Gleason 3+3	25 (86.2)
Gleason 3+4	4 (13.7)
Clinical stage	
T1c	7 (24.1)
T2a	11 (37.9)
T2b	6 (20.6)
T2c	4 (13.7)

Table 3. The postoperative features of the patients

Average hospitalization duration (day±SD)	2.7±0.6
Average catheterization duration (day±SD)	8.5±0.9
Clavien Dindo Complication classification	
1	3 (10.3)
2	1 (3.4)
Gleason score after operation, n (%)	
Gleason 3+3	6 (20.6)
Gleason 3+4	15 (51.79
Gleason 4+3	6 (20.6)
Gleason 4+5	1 (3.4)
Surgical margin positivity, n (%)	4 (13.7)
Pathological stage, n (%)	
T2a	3 (10.3)
T2b	4 (13.7)
T2c	14 (48.2)
T3a	6 (20.6)
T3b	2 (6.8)
Average follow up duration (month±SD)	8.4±2.8
3rd month continence ratio, n (%)	22 (75.8)
6th month continence ratio, n (%)	24 (82.7)
3rd month IIEF score	13.4±4.7
6th month IIEF score	14.2±2.7
Recurrence, n (%)	2 (6.8)

Table 2. The perioperative features of the patients

Average opeartion duration (min±SD)	134.7±11.8
Average anastomosis duartion (min±SD)	36.3±6
Average blood loss volume (ml±SD)	116.7±23.4

SS-81 [Urothelial Cancers-Superficial Tumor: Diagnosis]

Nonalcoholic fatty liver disease and mortality among bladder cancer survivors

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Objective: To evaluate the effect of nonalcoholic fatty liver disease (NAFLD) on the survival of patients with primary non-muscle invasive bladder cancer.

Material and methods: This retrospective study included 94 patients who underwent transurethral resection of primary bladder cancer between the years 2006 and 2019 at a single institution. NAFLD was diagnosed preoperatively by abdominal ultrasonography using standardized criteria. The Cox proportional hazards model was used to investigate the effect of NAFLD at baseline on incident bladder cancer. The Kaplan-Meier test was used to estimate the probability of survival. The Tarone-Ware test was used to compare the survival distributions of patients with and without NAFLD.

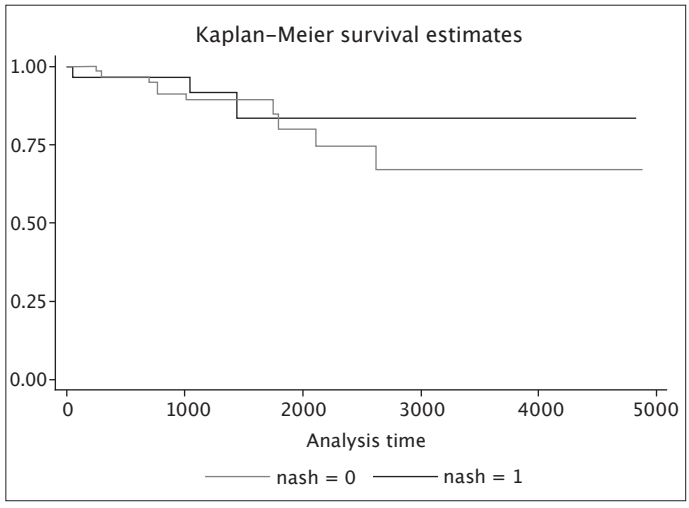

Figure 1. Overall survival, stratified by the presence of nonalcoholic fatty liver disease

Results: Of 94 patients with primary NMIBC, 29 (30.8%) had NAFLD. The mean age of patients with NAFLD was similar to the others (64.1±1.4 vs. 64±1.8, p=0.95). The distribution of gender was similar between the groups (p=0.93). The tumor stages and grades of the patients were not different (p=0.25 and p=0.82, respectively). The median follow-up was 39.2 months. Fourteen patients (14.8%) died from any causes. NAFLD was not associated with adverse 3-year overall (89% vs. 90%; p=0.56) survival.

Conclusion: NAFLD is not associated with reduced overall survival in patients with primary NMIBC.

Keywords: Bladder cancer, nonalcoholic fatty liver disease, survivor

SS-82 [Urothelial Cancers-Superficial Tumor: Diagnosis]

Correlation of metabolic syndrome with bladder cancer

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Objective: Metabolic syndrome is associated with a rising incidence of cancer and cancer-specific mortality. At the same time, the incidence of metabolic syndrome is increasing in our country and worldwide, as shown by recent studies. In this study, patients diagnosed with bladder cancer were retrospectively evaluated to assess the correlation of bladder cancer with metabolic syndrome and the effect on cancer stage, grade, presence of carcinoma in situ (CIS), and disease recurrence.

Material and methods: Patients with suspected bladder neoplasm who underwent cystoscopy and bladder tumor resection between July 2010 and July 2013 were analyzed. A total of 200 patients who were newly diagnosed with bladder cancer were included in the study. Two groups were created: 100 patients who had concomitant metabolic syndrome and 100 who did not. Patient age, sex, tobac-

Turk J Urol 2019; 45(Supp. 2): S194-S242
DOI: 10.5152/tud.2019.121119

co use, family cancer history, hypertension, presence of metabolic syndrome, metabolic syndrome components (waist circumference, triglycerides, high-density lipoprotein [HDL], blood pressure, and fasting glucose level), body mass index (BMI) parameters, and the bladder cancer stage, grade, incidence of CIS, and recurrence rate were evaluated.

Results: Of the total, 25 patients were female, and 175 were male. Metabolic syndrome was present in 50%. The average age was 63±12 years. Forty patients had diabetes mellitus, 70 had hypertension, 49 had a positive family history of malignancy, and 125 had a positive history of tobacco use. The mean systolic blood pressure was 127±10 mmHg, diastolic pressure was 82±8 mmHg, waist circumference was 97±10 cm, BMI was 25.5±2.3 kg/m^2, the fasting blood glucose level was 104±24 mg/dL, HDL was 47±9 mg/dL, and the triglyceride level was 163±64 mg/dL. The bladder cancer pathological stage reported was 24 patients with Ta, 135 with T1, and 41 patients with T2 tumor; 125 patients had low-grade and 75 had high-grade tumors. CIS was determined in 58 patients. In a mean follow-up of 18±4.2 months, no tumor recurrence was seen in 55 patients, 87 patients had 1 recurrence, 49 had 2 instances of tumor recurrence, and 9 patients had 3 instances of recurrence.

Conclusion: Tobacco use of >40 pack/years (p=0.001) and age >60 years (p=0.024) were independent risk factors for the bladder cancer stage, and positive family history of cancer (p=0.003) and tobacco use >40 pack/years (p=0.012) were independent risk factors for the bladder cancer grade. In a follow-up of 18±4.2 months, no correlation was found between metabolic syndrome criteria and bladder cancer parameters; however, the high systolic blood pressure rate and high triglyceride and glycated hemoglobin levels can negatively affect bladder cancer outcomes.

Keywords: Bladder cancer, metabolic syndrome, metabolic syndrome components

Table 1. Metabolic syndrome

	TM Stage				TM Degree			CIS			Recurrence		
MS	Ta	T1	T2	p	High Grade	Low Grade	p	Present	Absent	p	Present	Absent	p
PRESENT													
Frequency N	14	71	15	0.000	34	66	0.001	27	73	0.000	70	30	0.000
Row percentage %	14.0	71.0	15.0		34.0	66.0		27.0	73.0		70.0	30.0	
Column percentage %	58.3	52.6	36.6		45.3	52.8		46.6	51.4		48.6	53.6	
ABSENT													
Frequency N	10	64	26	0.000	41	59	0.072	31	69	0.000	74	26	0.000
Row percentage %	10.0	64.0	26.0		41.0	59.0		31.0	69.0		74.0	26.0	
Column percentage %	41.7	47.4	63.4		54.7	47.2		53.4	48.6		51.4	46.4	
p	0.414	0.547	0.086	0.137	0.419	0.531	0.307	0.599	0.737	0.533	0.739	0.593	0.529

SS-92 [Operative Techniques: Laparoscopic and Robotic Urology]

Case report: Nursing care in robotic bladder diverticulum surgery

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In this case report, the importance of nursing care in robotic bladder diverticulum surgery is emphasized. H.E.C., a 5-year-old male patient, began to have frequent infections after 3.5 years due to an enlargement of the kidneys. When H.E.C. was admitted to the hospital with the complaint of burning in urine, he was diagnosed with "bladder diverticulum," and robotic bladder diverticulum

surgery was planned. The patient was hospitalized in the H.E.C. urology clinic 1 night before surgery. Necessary sets and sutures were taken to the room on the day before surgery, and a blanket was laid on the operating table to maintain body temperature. The following surgical sets and materials were used: urology laparoscopic surgical set, urology laparoscopy set, cystoscopy set, robotic surgery arms, 0-30° optic and trocar set, vascular strap, laparoscopic sponge, sterile pen and ruler for measurements, hemolok clip shooters, camera cover, gas and aspiration hose, catagel, y set, irrigation syringe, 20 syringe, catheter, bladder, sponge, cautery, 5 and 10 assistant trocar. The patient was admitted to the operating room patient preparation unit from the clinic at 08:00, and he was taken to the operating room. After the anesthesia was started, the circular nurse began to open the sterile materials. The scrub nurse dressed the arm drapes with robotic arm covers. The scrub nurse performed the cauterization, aspiration, optics, gas hose connections. The assistant physician and scrub nurse made the necessary measurements with a sterile pen and ruler for the trocar entry. The first incision was made for the optic trocar of 8 mm from the umbilicus with a 15 scalpel, and the trocar was inserted. After making sure that the trocar was introduced into the abdomen, the gas hose was connected to the trocar, and the inside of the abdomen was inflated. The inlet pressure was normal, the inside of the abdomen began to swell, and when the abdomen reached a sufficient tension, the other

Figure 1. Table and robot preparation

Turk J Urol 2019; 45(Supp. 2): S194–S242
DOI: 10.5152/tud.2019.121119

trocar was inserted. In total, 4 ports were entered into the patient. After the patient was placed in the 30° Trendelenburg position, the robot approached the patient. The arms of the robot were attached to the trocar. Camera and instruments were placed. The Maryland Bipolar 1 arm, optical arm 2, and 3 monopolar curved sicissors (scissors) were attached, and the hemolok clip and aspiration port was prepared for the physician. The angles were given so that the arms did not come into contact. The surgeon sat on the console and checked the position of the robotic arms and began the surgery. The ureters were released during surgery and suspended with a 10 mm vascular sling. The diverticulum was removed. Then, arm 3 of the robot was replaced with a large nedele driver (Portugal) for anastomosis, and 6/0 vicril (polyglactin) was applied to the ureter bladder. The specimen was appropriately removed. Trocar locations were checked, and the trocar was removed. The skin was closed, and the patient was dressed. The position of the patient was corrected, the safe surgical form was closed, and the patient was transferred to the patient wake-up unit on a stretcher as appropriate.

Keywords: Bladder diverticulum, nursing care, robotic surgery