Selected Abstracts from the 27th National Urology Congress

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

[Abstract:0148] OP-072 [Localized Kidney Tumors: Diagnosis and Treatment]

The comparative Trifecta analysis of open and minimally invasive partial nephrectomy techniques: The Results of Multicenter Partial Nephrectomy Database of Turkish Urology Academy Urooncology Study Group

Selçuk Erdem[1], Özgür Efiloğlu[2], Öner Şanlı[1], Abdullah Erdem Canda[3], Ali Fuat Atmaca[3], Yaşar Bozkurt[4], Burak Turna[5], Bülent Semerci[5], Sedat Çakmak[6], Cemil Kutsal[6], Fatih Akbulut[7], Volkan Tuğcu[8], Uğur Boylu[9], Sakıp Erturhan[10], Orhan Koca[11], Ferhat Ateş[12], Fikret Halis Demir[13], Sedat Soyupek[14], Turhan Çaşkurlu[2], Faruk Özcan[1], Asıf Yıldırım[2]

[1]*Department of Urology, İstanbul University İstanbul School of Medicine, İstanbul, Turkey*
[2]*Department of Urology, İstanbul University İstanbul School of Medicine, İstanbul, Turkey*
[3]*Department of Urology, Ankara Yıldırım Beyazıt University Atatürk Training and Research Hospital, Ankara, Turkey*
[4]*Department of Urology, Dicle University School of Medicine, Diyarbakır, Turkey*
[5]*Department of Urology, Ege University School of Medicine, İzmir, Turkey*
[6]*Department of Urology, Health Science University Şişli Hamidiye Etfal Training and Research Hospital, İstanbul, Turkey*
[7]*Department of Urology, Health Science University Haseki Training and Research Hospital, İstanbul, Turkey*
[8]*Department of Urology, Health Science University Bakırköy Sadi Konuk Training and Research Hospital, İstanbul, Turkey*
[9]*Department of Urology, Health Science University Ümraniye Training and Research Hospital, İstanbul, Turkey*
[10]*Department of Urology, Gaziantep University School of Medicine, Gaziantep, Turkey*
[11]*Department of Urology, Health Science University Haydarpasa Numune Training and Research Hospital, İstanbul, Turkey*
[12]*Department of Urology, Health Science University Abdulhamid Han Training and Research Hospital, İstanbul, Turkey*
[13]*Department of Urology, Ministry of Health Sakarya University Training and Research Hospital, Sakarya, Turkey*
[14]*Department of Urology, Süleyman Demirel University School of Medicine, Isparta, Turkey*

Objective: In this study using a multicentric partial nephrectomy (PN) database, it is aimed to compare trifecta success rates between open and minimally invasive (laparoscopic and robot-assissted laparoscopic) techniques.

Material and methods: Six medical faculty urology departments and 8 education-training hospital urology clinics in Turkey retrospectively recorded 1526 PN cases to a web-based database. This study evaluated 1381 cases whose trifecta records were available. Providing all of the following 3 criterias is accepted as trifecta: 1) Surgical margin negativity 2) Preserving at least 80% postoperatively estimated glomerular filtration rate (eGFR) 3) Lack of Clavien Grade ≥3 complication. The cases were classified in two groups according to operative techniques: Group 1 (n=702, Open) and Group 2 (n=679, Laparoscopic and Robot-Assisted Laparoscopic) Demographics, clinical, histopathological and renal functional parameters were compared between two groups. Chi-square and Mann-Whitney U tests were used for categorical and continous variables, respectively.

Results: Trifecta success was 59.9% in overall cohort. The 56.8% success in open group and 63.0% success in minimally invasive group were found to be statistically significant (p=0.019). While the rates of surgical margin negativity (93.2% vs. 94.3%, p=0.403) and complication lower than Clavien 3 (96.9% vs. 98.2%, p=0.101) were similar between two groups, the rate of at least 80% eGFR preservation was statistically higher in minimally invasive group (61.7% vs. 66.9%, p=0.045). While rates ofcomorbidities (46.5% vs. 52.4%, p=0.033), diabetes mellitus (14.5% vs 19.1%, p=0.022) and hypertension (18.8% vs. 23.1%, p=0.049) were higher in minimally invasive group, while preoperative tumor size (3.6 vs. 3.1 cm, p<0.001) and clinical T stage (p<0.001) were statistically higher in open group. While the preference of enucleation or enucleoresection was higher in minimally invasive group (68.9% vs. 84.9%, p<0.001), estimated blood loss (200 mL vs. 100 mL, p<0.001), perioperative transfusion rate (7.8% vs. 1.3%, p<0.001), pelvicaliceal system repair (21.1% vs. 10.9%, p<0.001), length of hospital stay (5 days vs. 4 days, p<0.001), complication rate (p=0.009), pathologic tumor size (3.5 vs. 3.0 cm, p<0.001) and pathologic T stage (p=0.004) were significantly higher in the open group.

Conclusion: In this multicenter national PN database, it is observed that trifecta success in minimally invasive technique is better compared to open technique. The decreased renal functional preservation in open group due to greater tumor size and higher T stage is found to be the main components determining trifecta success.

Keywords: Open and minimally invasive techniques; partial nephrectomy; trifecta.

Table 1. Demographics, perioperative, histopathological and renal functional outcomes

	Open	Minimally invasive	p
n	702	679	
Trifecta (n, %)	399 (56.8)	428 (63.0)	0.019
Surgical margin negativity (n, %)	654 (93.2)	640 (94.3)	0.403
Clavien grade <3 (n, %)	680 (96.9)	667 (98.2)	0.101
Postoperative decline <20% in eGFR	433 (61.7)	454 (66.9)	0.405
Age (year)	57 (9-88)	56 (17-87)	0.563
Body mass index (kg/m^2)	27.31 (17.72-66.41)	27.46 (17-30-52.03)	0.068
Male/Female (n, %)	413/289, (58.8/41.2)	423/256 (62.3/37.7)	0.188
Symphtomatic/Incidental (n, %)	218/469 (31.7/68.3)	183/493 (27.1/72.9)	0.059
Co-morbidity (n, %)	303 (46.5)	348 (52.4)	0.033
Diabetes mellitus (n, %)	102 (14.5)	130 (19.1)	0.022
Hypertension (n, %)	132 (18.8)	157 (23.1)	0.049
ASA score	2 (1-4)	2 (1-4)	0.224
Risk factor (n, %)	272 (45.3)	190 (29.6)	<0.001
Solitary kidney (n, %)	21 (3.2)	20 (3.0)	0.816
Preoperative tumor size (mm)	36.0 (10.0-145.0)	31.0 (10.0-120.0)	<0.001
Tumor exopytic percent (n, %)			**0.182**
<25%	96 (13.7)	73 (10.8)	
25%-50%	196 (27.9)	220 (32.4)	
51%-75%	282 (40.2)	267 (39.3)	
>75%	128 (18.2)	119 (17.5)	
Tumor localisation (n, %)			**0.011**
Upper pole	205 (30.1)	189 (28.0)	
Lower pole	264 (38.8)	245 (36.4)	
Middle zone	197 (28.9)	236 (35.0)	
Hilar	15 (2.2)	4 (06)	
R.E.N.A.L. Nephrometry score	6 (4-11)	6 (4-11)	0.611
Clinical T stage (n, %)			**<0.001**
T1a	449 (64.0)	517 (76.1)	
T1b	218 (31.1)	151 (22.2)	
T2a	31 (4.4)	7 (1.0)	
T2b	4 (0.6)	4 (0.6)	
Operative time (min)	130.0 (40.0-295.0)	138.0 (40.0-510.0)	0.003
Resection type (n, %)			**<0.001**
Enucleoresection	386 (60.2)	485 (72.4)	
Wegde resection	199 (31.0)	101 (15.1)	
Enucleation	56 (8.7)	84 (12.5)	
Ischemia type (n, %)			**<0.001**
Warm ischemia	394 (61.5)	531 (80.8)	
Cold ischemia	56 (8.7)	2 (0.4)	
Renal compression	15 (2.3)	0 (0.0)	
Zero ischemia	176 (27.5)	124 (18.9)	
Estimated blood loss (mL)	200 (10-3300)	150 (10-2100)	<0.001
Intraoperative frozen analysis (n, %)	106 (15.1)	53 (7.8)	<0.001
Pelvicaliciel system repair (n, %)	131 (21.1)	73 (10.9)	<0.001
Double-J stent use (n, %)	71 (10.1)	17 (2.5)	<0.001
Perioperative blood transfusion (n, %)	48 (7.8)	9 (1.3)	<0.001
Hemostatic agent use (n, %)	398 (64.8)	284 (42.5)	<0.001
Length of hospital stay (day)	5.0 (2.0-35.0)	4.0 (1.0-60.0)	<0.001
Pathologic tumor size (mm)	35.0 (10.0-180.0)	30.0 (8.0-120.0)	<0.001
Surgical margin positivity (n, %)	48 (6.8)	39 (5.7)	0.403
Pathologic T stage (n, %)			**0.004**
T1a	372 (64.2)	399 (72.5)	
T1b	171 (29.5)	130 (23.6)	
T2a	19 (3.3)	4 (0.7)	
T2b	3 (0.5)	3 (0.5)	
T3a	14 (2.4)	14 (2.5)	
Complication (n, %)	**221 (31.5)**	**171 (25.2)**	**0.009**
Preoperative creatinine (mg/dL)	0.85 (0.38-5.72)	0.81 (0.33-3.24)	0.401
Preoperative eGFR (mL/min/1.73 m^2)	88.93 (11.20-232.44)	92.34 (15.94-302.17)	0.049
Postoperative creatinine (mg/dL)	1.0 (0.2-6.2)	0.93 (0.4-4.09)	0.022
Preoperative eGFR (mL/min/1.73 m^2)	76.12 (7.51-406.43)	81.55 (15.07-208.95)	0.001
Postoperative preserved renal function (%)	86.34 (9.04-488.06)	88.08 (23.02-187.90)	0.013

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

[Abstract:0136] OP-054 [Lower Urinary System Pathologies, Urodynamics, Neurourology-Treatment]

Do educational level and cognitive status of patients affect efficacy and revision rates of *artificial urinary sphincter* implantation? The first multi-institutional study performed in Turkish men

Ahmet Keleş[1], Rahmi Onur[2], Burhan Coşkun[3], Murat Aydos[4], Orhan Koca[5], Murat Dinçer[6], Ahmet Karakeçi[7], Muhammed Sulukaya[8]

[1]*Department of Urology, İstanbul Esenyurt State Hospital, İstanbul, Turkey*
[2]*Department of Urology, Marmara University School of Medicine, İstanbul, Turkey*
[3]*Department of Urology, Uludağ University School of Medicine, Bursa, Turkey*
[4]*Department of Urology, University of Health Sciences Bursa Yüksek İhtisas Training and Research Hospital, Bursa, Turkey*
[5]*Department of Urology, University of Health Scienes Haydarpaşa Numune Training and Research Hospital, İstanbul, Turkey*
[6]*Department of Urology, University of Health Scienes Bağcılar Training and Research Hospital, İstanbul, Turkey*
[7]*Department of Urology, Fırat University School of Medicine, Elazığ, Turkey*
[8]*Department of Urology, University of Health Sciences Malatya Training and Research Hospital, Malatya, Turkey*

Objective: Artificial urinary sphincter (AUS) is considered as the gold standard treatment modality for male stress urinary incontinence (SUI). In the present multi-institutional patient cohort, we aimed to examine the outcomes of AUS implantation as wel as relationship between the education level and cognitive function of patients and the succes rate and reoperation (revision or replacement) rates in patients with post prostatectomy incontinence.

Material and methods: Between 2007 and 2017, 141 patients with ages varying between 65-74 years (median 70) underwent AUS implantation were examined.The patients comorbidities, prior radiation therapy and history of urethral strictures were recorded. Pre-, and post-operative incontinence was evaluated by a validated questionnaire, International Consultation on Incontinence Questionnaire-short form (ICIQ-SF), whereas

Table 1. Related factors for AUS failure and revision

Parameter		Failure, n, %	p	Revision, n, %	p
BMI, kg/m^2 n (%)	Normal (BMI <25)	5 (12.5)	0.207	11 (27.5)	0.840
	Overweight (BMI 25-30)	12 (14.8)	0.129	19 (23.5)	0.088
	Obese (BMI >30)	10 (50.0)	0.001	11 (55.0)	0.006
Age, yr, n (%)	>65	18 (17.5)	0.365	31 (30.1)	0.505
	≤65	9 (24.3)		9 (24.3)	
MMSE score, n (%)	Cognitive intact (MMSE >25)	1 (2.0)	0.194	14 (27.5)	0.749
	Mild cognitive impairment (MMSE 21-24)	5 (20.0)	1.000	7 (28.0)	0.896
	Moderate cognitive impairment (MMSE 10-20)	21 (32.3)	<0.001	20 (30.8)	0.683
Education level	Level 1	19 (30.6)	0.002	24 (39.3)	0.009
(ISCED category) n (%)	Level 2	4 (14.8)	0.524	7 (25.9)	0.688
	Level 3	3 (11.5)	0.409	4 (15.4)	0.089
	Level 4	1 (5.6)	0.197	4 (22.2)	0.493
	Level 5	-		-	
	Level 6	0 (0.0)	0.353	1 (12.5)	0.438
Operation technic	Perineal	19 (18.1)	0.587	30 (28.6)	0.821
	Penoscrotal	8 (22.2)		11 (30.6)	
DM, n (%)	No	23 (21.3)	0.241	35 (32.4)	0.115
	Yes	4 (12.1)		6 (18.2)	
Previous radiation, n (%)	No	23 (21.3)	0.241	29 (26.9)	0.381
	Yes	4 (12.1)		12 (36.4)	

pre-and post-operative pad use was recorded for all patients. Health-related quality of life and subjective satisfaction of the patients was evaluated with the Patient Global Impression of Improvement (PGI-I) questionnaire. The education level was determined by assessing the International Standard Classification of Education (ISCED 2011). Similarly, cognitive function was examined by using the Mini Mental Status Examination (MMSE) test. Treatment success was defined as a need for ≤1 pad/day at the last follow up. Postoperative complications were assessed using Clavien-Dindo grading system.

Results: The mean follow-up period was 41.0±37 months (range: 3-133). There was no perioperative severe complication. The ICIQ-SF score statistically significantly improved from 17.9±3 to 4.5±5.4 ($p<0.001$) at the last follow-up. The median outcome on the PGI-I scale was 2 "much better," according to patients subjective responses. A total of 41 (29.1%) patients failed the procedure and required revision. The indications for revisions were as follows: 11 (7.8%) patients developed infection, mechanical failure was present in 13 (9.2%) and erosion developed in 17 (12.1%) patients. Although patients with moderate cognitive impairment had statistically significantly lower success rates for AUS implantation ($p<0.001$), there was no significant relationship between cognitive status and requirement for revision. Patients in ISCED Level I (primary school) showed statistically significantly lower success rates for AUS implantation also increased requirement for revision. Similarly, obese (BMI >30 kg/m^2) patients exhibited statistically significantly lower success rates for AUS implantation, and increased requirement for revision. Table 1 shows predictive factors for AUS success/revision.

Conclusion: In this study, patients with post prostatectomy incontinence who received AUS implantation showed similar success and revision rates in compliance with the literature. We believe that success of AUS mplnwas not related to the surgeon operating but it's rather related to difficulty of its use in patients with moderate cognitive impairment and low education level. Our study indicated that AUS implantation seems to be a safe and effective treatment option for cognitively intact, non-obese and moderate-to-well educated patients. However, additional trials with larger series and long-term follow-up are needed to determine the predictive factors for success.

Keywords: Artificial urinary sphincter; cognitive status; education; male incontinence; stress urinary incontinence.

[Abstract:0150] OP-037 [Pediatric Urology]

Protective effect of Hydrogen Sulphite on experimental testicular ischemia-reperfusion in rats

Muammer Bozkurt[1], Recep Burak Değirmentepe[1], Emre Can Polat[1], Funda Yıldırım[2], Kıvılcım Sönmez[2], Mustafa Çekmen[3], Ceyla Eraldemir[3], Alper Ötünçtemur[1]

[1]Department of Urology, University of Health Sciences, Okmeydanı Training and Research Hospital, İstanbul, Turkey
[2]Department of Pathology, İstanbul University-Cerrahpaşa, Faculty of Veterinary Medicine, İstanbul, Turkey
[3]Department of Biochemistry, Kocaeli University School of Medicine, Kocaeli, Turkey

Objective: Testicular torsion is an urgent urological condition, with an acute onset and can be lead to advanced level of ischemia in the testis and requires rapid diagnosis and treatment. Ischemia-reperfusion (I/R) processes that occur after detorsion as a treatment for torsion are caused by testicular injury. The aim of our study is to investigate the effect of hydrogen sulphide (H_2S) on the testicular ischemic reperfusion injury.

Material and methods: Thirty-eight Wistar-Albino rats were divided randomly into 6 groups. Control (n=6), Sham (n=6), IR-E (n=6); 2 hours of torsion and 4 hours of reperfusion, IR-E + H2S (n=6). IR-E group also received 75 μmol/kg sodium hydrogen sulphide (NaHS) administered intraperitoneally 30 min before reperfusion, IR-G (n=7); 2 hours of torsion and 24 hours of reperfusion, IR-G + H2S (n=7). IR-G group received 75 μmol/kg sodium hydrogen sulphide (NaHS) administered intraperitoneally 30 min before reperfusion. Nitric Oxide (NO), Malondialdehyde (MDA), Superoxide dismutase (SOD) and Reductive Glutathione (GSH) and TNF-α levels were measured in the testes. Serum TNF-α levels were also measured. The specimens were histopathologically stained with hematoxylin & eosin (H & E) and examined under microscope. The Johnsen Score was performed to assess spermatogenetic activity in the testis. Apoptosis protease activating factor 1 (Apaf-1) and inducible nitric oxide synthase (iNOS) activity were also evaluated immunohistochemically. Statistical analyses were made using the chi-square test and one-way analysis of variance (ANOVA).

Results: In biochemical evaluation; MDA and NO levels significantly increased in the IR-G group compared to Sham Group and decreased by the addition of H2S treatment to the IR-G group ($p<0.05$). GSH ve SOD levels decreased in the IR-G group compared to Sham and increased by the addition of H2S treatment to the IR-G group, but this correlations were not statistically significant ($p>0.05$). Tissue and serum TNF-α levels were significantly increased in the IR-E group compared to Sham and decreased by the addition of H2S treatment to the IR-E group. Jonhson score was lowest in IR-G group ($p<0.05$). In immunohistochemical evaluation; activities of Apaf-1 and iNOS significantly increased in the IR-G group compared to Sham and decreased by the addition of H2S treatment to the IR-G group ($p<0.05$).

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

Table 1. Comparison of Apaf-1 and iNOS values between groups

		Apaf-1				iNOS			
	n	0	1	2	3	0	1	2	3
Control	6	5	1	0	0	4	2	0	0
Sham	6	4	2	0	0	5	1	0	0
IR-G[a]	7	0	0	1	6	0	0	2	5
IR-G+H_2S[b]	7	0	5	2	0	0	4	3	0

[a]Statistically Significantly different from the Sham group ($p<0.05$)
[b]Statistically Significantly different from the IR-G group ($p<0.05$)

Conclusion: We can say that H2S treatment is protective against ischemia-reprefusion injury in unilateral testicular torsion. We believe that this protective effect is due to the antiinflammatory, antioxidant and antiapoptotic properties of H2S.

Keywords: Hydrogen sulphite; ischemia reperfusion; testicular torsion.

[Abstract:0407] OP-027 [Prostatic Carcinoma-Diagnosis]

Aggressive prostate cancer development might be under the regulation of both Tregs and miRNAs

İbrahim Akalın[1], Bülent Erol[2], Ezgi Aslan[3], Sıdıka Şeyma Özkanlı[4], Özgür Efiloğlu[2], Salih Yıldırım[3], Hasan Güçlü[5], Turhan Çaşkurlu[2], Muhammet Ihsan Karaman[2]

[1]*Department of Medical Genetics, İstanbul Medeniyet University School of Medicine, İstanbul, Turkey*
[2]*Department of Urology, İstanbul Medeniyet University School of Medicine, İstanbul, Turkey*
[3]*İstanbul Medeniyet University School of Medicine, İstanbul, Turkey*
[4]*Department of Pathology, İstanbul Medeniyet University School of Medicine, İstanbul, Turkey*
[5]*Department of Biostatistics, İstanbul Medeniyet University School of Medicine, İstanbul, Turkey*

Objective: The progress of prostate cancer involves complex tumor developmental events in diverse stages which are still yet to be clarified. miRNAs may be considered in the balance between regulatory (FOXP3+) and cytotoxic T cells in tumors. Regulatory T cells (Tregs) inhibit a wide range of antitumor immune responses induced by immunoregulatory cytokines such as TGF-b, IL-10, IL-35. Tregs express Foxp3, a transcription factor, that inhibits antitumor immune response and it is essential for Treg differentiation. Increased amount of Tregs have been also observed in prostate cancer tissue when compared to normal prostate tissue and they have been associated with worse clinical outcome. Microribonucleic

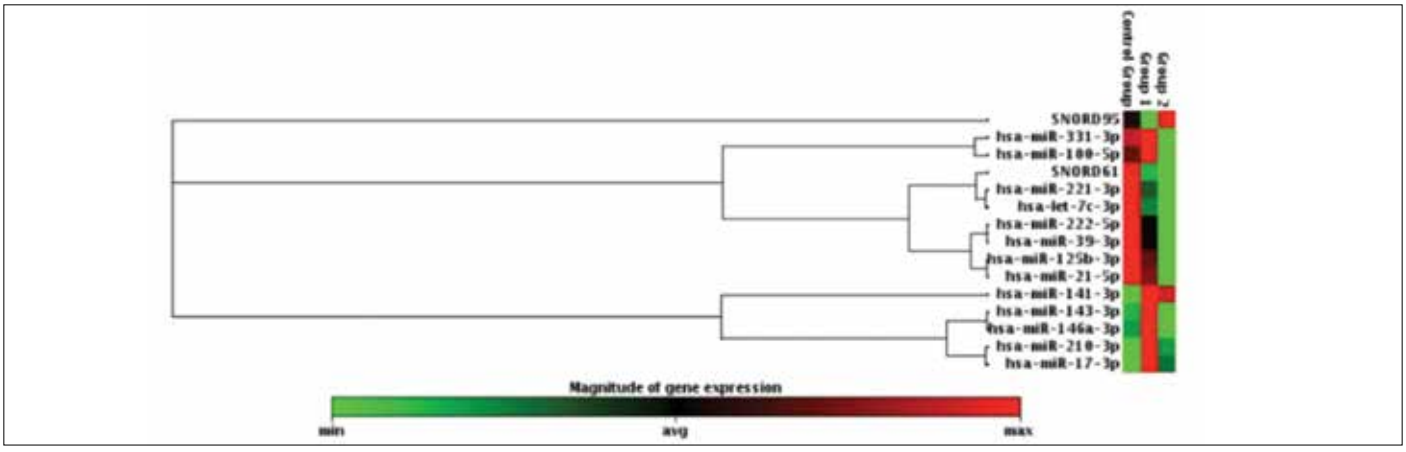


Figure 1. Clustergram of miRNAs expressions in different grades of prostate cancer compared to benign hyperplasia
This cluster gram was created with online QIAGEN miScript Primer Assay Data Analysis Centre. Accordingly, miRNA expression levels decreased (green) or increased (red) compared to the control group

acids (miRNAs) are highly conserved. miRNAs are small non-coding RNA molecules approximately 21-24 nucleotides in length that control post-transcriptional gene expression in a wide variety of cellular processes including cell proliferation, differentiation, cell fate determination, signal transduction, organ development, angiogenesis, apoptosis and tumorigenesis. Here, we investigated miRNAs and FOXP3 expressions in patients with prostate cancer spectrum.

Material and methods: Thirty-eight prostate cancer patients enrolled within two groups having Gleason Scores of ≤7 (Group 1); and ≥ 8 (Group 2) and 19 benign prostatic hyperplasia (BPH) as controls. Twelve miRNA expressions were analyzed by real-time PCR from paraffin-embedded prostate tissue samples (Figure 1). Correlation analyses were made between serum PSA levels, immunohistochemical stained of CD3, CD4, FOXP3 and miRNA expressions.

Results: We found, hsa-let7c-3p significantly, ie. 1.52 (p=0.018) and 1.84-fold (p=0,0095) down-regulated whereas, miR-141-3p was significantly ie.2.36 (p=0.0006) and 2.24-fold (p=0.001) upregulated in the prostate cancer patients compared to BPH in Groups 1 and 2, respectively. Only CD4 (p=0,004) and PSA (p<0,001) were statistically significantly different among groups when compared to BPH. The Treg marker FOXP3 expressions were significantly correlated with miR-143-p, miR-221-3p, hsa-let7c-3p and miR-17-3p expressions. No significant correlations were found between CD3, CD4 and miRNA or between PSA and FOXP3 expressions.

Conclusion: We, for the first time, reported significantly altered expressions of miRNAs (miR-let7c, miR-221, miR-146a, miR-141, miR-143, miR17) and correlations between them, and Treg marker FOXP3 in the prostate cancer patients suggesting that prostate cancer progression might be under the regulation of both Tregs and miRNAs.

Keywords: Gleason score; miRNA; prostate cancer; TREG.

[Abstract:0417] OP-057 [Andrology Erectile Dysfunction (Male, Female) Treatment]

The impact of liraglutide treatment on the erectile function of the diabetic rats

Serkan Gönültaş[1], Murat Tüken[2], Mehmet Gökhan Çulha[3], Hasan Hüseyin Tavukcu[4], Ege Can Şerefoğlu[5], Atilla Semercioöz[6]

[1]*Department of Urology, Gaziosmanpaşa Taksim Training and Research Hospital, İstanbul, Turkey*
[2]*Department of Urology, Bakirköy Sadi Konuk Training and Research Hospital, İstanbul, Turkey*
[3]*Department of Urology, Okmeydanı Training and Research Hospital, İstanbul, Turkey*
[4]*Department of Urology, Florence Nightingale Hospital, İstanbul, Turkey*
[5]*Uroklinik-Center of Excellence in Urology, İstanbul, Turkey*
[6]*Department of Urology, Bağcılar Training and Research Hospital, İstanbul, Turkey*

Objective: Glucagon-like peptide-1 (GLP-1) is a peptide hormone released from intestinal L cells following intake of nutrients. It potentiates secretion of insulin from pancreatic beta cells thus GLP-1 analogues are used for the treatment of type 2 diabetes mellitus (T2DM). The aim of this study is to evaluate the impact of GLP-1 receptor agonist liraglutide on the erectile function of the diabetic rats.

Material and methods: A total of 30 male Sprague-Dawley rats (13 weeks old, 240-335 gr) were fed with fatty diet for 2 weeks. The rats were divided into 3 groups (n=10 each). The rats in the first group served as controls (Group C) whereas streptozosin was injected to the rats in the remaining two groups to induce T2D (Group D) and treatment group (group DT). Rats in Group D, and T received subcutaneous injections of citrate buffer, and liraglutide injections (0.3 mg/kg/12h), respectively. Erectile functions of all rats were evaluated with intracavernosal pressure (ICP)/mean arterial pressure (MAP) measurements. Moreover, sex hormone levels (testosterone, FSH, LH) were evaluated and histological assessment of the midpenile tissue were performed (Collagen Type IV, rat epithelial antigen 1, nNOS).

Results: Mean maximum ICP/MAP ratios were 0.790±.164, 0.263±0.139 and 0.652±0.131 in Groups C, D and DT, respectively. Although mean ICP/MAP ratios were similar in Groups C and DT (p=0.076), mean ICP/MAP ratio was significantly lower in Group D (p<0.001). Histological analyses revealed that nNOS (p<0.001) rat epithelial antigen 1 (RECA-1) (p=0.016) and muscle/collagen ratio (p<0.015) were also lower in Group D compared with the other groups. Testosterone, FSH and LH values were significantly lower in the Group D (p=0.01).

Conclusion: GLP-1 receptor agonist liraglutide demonstrated protective effects on the erectile tissues of the diabetic rats. Clinical trials are required to confirm if liraglutide treatment has also similar beneficial effects on men who have T2D.

Keywords: Collagen Type IV; erectile dysfunction; liraglutide; Nnos; RECA-1; Type 2 diabetic rat.

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

[Abstract:0222] OP-039 [Operative Techniques - Reconstructive Techniques]

Female urethroplasty with labium minor mucosal graft: Our first results

Osman Özdemir, Kamil Gökhan Şeker, Yusuf Arıkan, Mithat Ekşi, Yunus Çolakoğlu, Ramazan Uğur, Abdulmuttalip Şimşek

Department of Urology, University of Health Sciences Bakırköy Training and Research Hospital, İstanbul, Turkey

Objective: In women, urethral stricture is confronted as a rare condition in the practice of urology. Iatrogenic factors, previous surgeries, trauma, history of pelvic radiation can play a role in the etiology of urethral strictures in women. In this paper it was aimed to share early results of urethroplasty cases with labia minora graft urethroplasty performed in our clinic.

Material and methods: Five cases of labium minora mucosal graft urethroplasty case which were performed since September 2017 in our clinic were evaluated. Uroflowmetry (UF) and postvoiding residual volume (PVR) were measured in all patients preoperatively. UF and PMR were also studied in the first, third, sixth and ninth months during the postoperative period. All patients underwent cystourethroscopy at postoperative third month.

Results: The median age of the patients was 48.2 years. The etiologies of urethral strictures were found to be trauma in 1, iatrogenic causes in 3 and idiopathic causes in 1 patient. In one of the patients, mea remained completely closed in the preoperative period and she was being followed with suprapubic cystostomy catheter and preoperative Qmax and PMR values of this patient could not be calculated. The median Qmax value of this patient at the postoperative first month was 21.1 mL/sec and the PMR was 10 cc. In the other four patients, preoperative and postoperative Qmax values were significantly improved. Similarly, there was a significant difference in the preoperative and postoperative PMRs of these four patients. Qmax and PMR values of all patients at the preoperative and postoperative one, three, six and nine months were given in Table 1. The median follow-up period of the patients was 7.6 months. None of the patients had stenosis as detected during cystourethroscopy performed at 3 months postoperatively and the patients were still followed up without recurrence of stenosis.

Discussion: Urethral stricture is one of the difficult urological diseases to manage and urethral stricture in women is rare in urology practice. Iatrogenic factors, previous surgeries, trauma, history of pelvic radiation can play a role in the etiology of urethral strictures in women. The disease recurrence after endoscopic treatment of urethral strictures and the need for re-endoscopic surgery or recurrent benign dilatation are frequently encountered, and this condition has a serious negative effect on patient life. Urethroplasty technique is a superior technique due to the fact that both the possibility of recurrence is lesser and the long-term results are much better, and the symptomatic improvement is striking early in the postoperative period. When the graft is used during urethroplasty, the most commonly used graft is oral mucosa but mucosa of labium minor can be used in female patients as well as in our case (Figure 1).

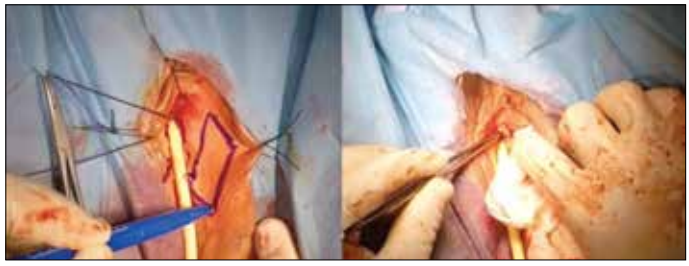


Figure 1. Harvesting labium minör graft (left) and final anastomotic graft (right)

Conclusion: Urethroplasty technique using mucosa of labium minor is a surgical method that can be used safely with good postoperative results, increased voiding function and improved quality of life in female patients with urethral strictures. For better results there is a need for a wider patient population and long-term follow-up that are deficiencies of our work.

Keywords: Female urethroplasti, labim minor mucosa graft; Urethral stricture.

Table 1. Preop. and postop results of the patients who underwent labia minora mucosa graft urethroplasty

Patient no	Age	Etiology	Follow-up period	QMAX (mL/s)					PMR (mL)					Postop cystoscopy
				Preop	1st month	3rd months	6th months	9th months	Preop	1st month	3rd months	6th months	9th months	
1	44	Traumatic	11th months	9.1	22.3	22.1	20.4	20.2	145	0	0	0	0	No stricture
2	61	Iatrogenic	10th months	N/A	21.1	20.7	20.3	19.5	N/A	10	15	15	15	No stricture
3	40	Iatrogenic	8th months	8.8	19.3	19	18.5	-	130	18	20	25	-	No stricture
4	47	Iatrogenic	5th months	6.5	24.2	22.1	-	-	205	0	0	-	-	No stricture
5	49	Idiopathic	4th months	7.6	23.2	22.4	-	-	170	10	10	-	-	No stricture

[Abstract:0261] OP-076 [Localized Kidney Tumors: Diagnosis and Treatment]

Does partial nephrectomy for kidney tumors affect surgical technique results? 'MIC' score and 'Trifecta' rates

Abdurrahman İnkaya, Ahmet Tahra, Resul Sobay, Eyüp Veli Küçük, Ugur Boylu

Department of Urology, Health Sciences University Ümraniye Training and Research Hospital, İstanbul, Turkey

Objective: To report the results of Margins, Ischemia, Complications (MIC) score and 'trifecta' rates of cases in whom open, laparoscopic and robot-assisted partial nephrectomy were performed due to kidney tumors.

Material and methods: Between 2007 and August 2018 open partial nephrectomy (OPN) (n: 58), laparoscopic partial nephrectomy (LPN) (n: 32) and robot assisted partial nephrectomy (RPN) (n: 126) were performed. Demographic characteristics, tumor characteristics, perioperative and postoperative outcomes of cases, operative data and complications, histopathologic features were evaluated retrospectively. MIC Score which takes into account surgical margin negativity, ischemia time less than 20 minutes and lack of any complications, outcomes of nephron sparing surgery performed for kidney tumors. Also rates of trifecta (surgical margin negativity, none of complications and glomerular filtration rate (GFR) >90% protection parameters) were reported.

Results: We found that RPN has decreased hospital stay, transfusion rate and overall complications compared to OPN. Despite shorter operative time and ischemic time in the OPN, there was a higher amount of blood loss and hospital stay was prolonged. There was no significant difference between the three techniques as for surgical margin positivity and e-GFR >90% preservation. A statistically significant difference was found in the duration of the warm ischemia time as OPN <RPN <LPN. MIC score rates were 79.3% in OPN, 71% in LPN and 81.7% in RPN. Our 'trifecta' rates were 87% in OPN, 87.5% in LPN and 93.6% in RPN.

Conclusion: MIC scores and trifecta rates are easy to use, reproducible and useful tools for partial nephrectomy outcomes to report. Lower tumor complexity, its application by surgeons with open and laparoscopic surgery experience in patients with better performance without previous surgery, can affect the success rate of RPN. It is the increase in warm ischemia during the suture phase, which most affects the MIC score of LPN. We believe that the use of minimally invasive techniques such as RPN will become widespread in the management of masses with smaller/lower complexity with more effective use of imaging modalities in the near future.

Keywords: Cancer; kidney; MIC score; nephrectomy; partial; trifecta.

[Abstract:0559] OP-083 [Localized Kidney Tumors Diagnosis and Treatment]

Cost-effectiveness of open partial nephrectomy and laparoscopic partial nephrectomy

Taha Uçar, Ayberk İplikçi, Turgay Turan, Furkan Şendoğan, Turhan Çaşkurlu, Asıf Yıldırım

Department of Urology, İstanbul Medeniyet University Göztepe Training and Research Hospital, İstanbul, Turkey

Objective: The cost-effectiveness of open partial nephrectomy versus laparoscopic procedure is compared.

Material and methods: The cost of laparoscopic partial nephrectomy (LPN) versus open partial nephrectomy (OPN) were calculated according to billing system in our hospital. Total of 10 patients were included in each group. The calculation has been made in terms of intraoperative, hospital stay, the drug use and second appointment within 30 days after discharge.

Results: Mean in-hospital costs were 4610 TL (95% CI 3426 TL-5720 TL) versus 4647 TL (95% CI 3459 TL-5762 TL) for OPN and LPN respectively (p=0.947). Mean age of the group was 58.4±14.2 years and mean size of the tumors was 44.26±35.3 mm. Mean hospital stay was 3.58±1.7 days and one patient from OPN group applied for deep vein thrombosis at his second admission. Clear cell renal cancer was found in 55% and angiomyolipoma in 15% of the patients in all group. No recurrence or metastasis was detected for both groups during mean time of 10±6.7 months of the follow-up period.

Conclusion: In this economic model LPN and OPN were both cost-effective surgical techniques with similar compilation rates, hospital stay and costs.

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

Keywords: Cost-effectiveness; laparoscopic; nephrectomy; open; partial.

[Abstract:0080] OP-001 [Other]

Application for Mersin University Faculty of Medicine Department of Urology internship on mobile devices and digital standardization of the examination project

Erdem Akbay, Erim Erdem, Ercüment Ulusoy, Selahittin Çayan, Murat Bozlu, Hasan Erdal Doruk, Mesut Tek

Department of Urology, Mersin University School of Medicine, Mersin, Turkey

As in all areas of life, technological developments have required paradigm shifts in medical education. Computers and mobile phones are also utilized in the health sector in many applications to have their facilitating roles in every field of daily life. In spite of all these developments, there is not yet "Internship Application" which will use the contribution of technology to the whole internship education period. With the project, Mersin University will bring a new perspective to internship program management as a first application in the whole country. At the same time, the use of this application will help to overcome many problems encountered during the internship regarding not only faculty members but also the interns.

Keywords: Computer; digital standardization of the examination; internship; mobil devices.

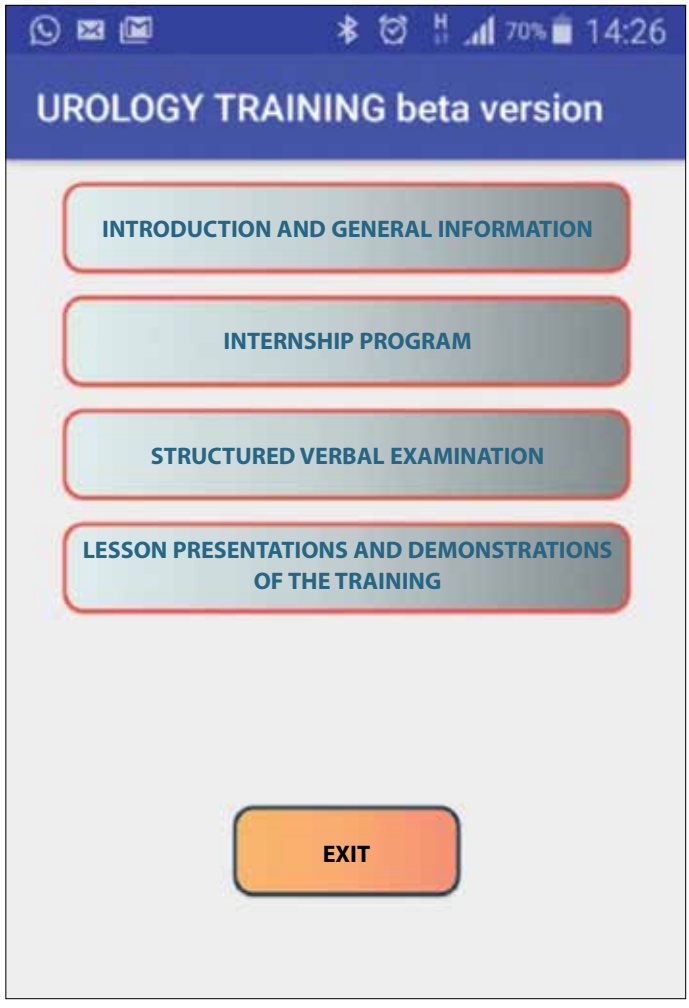


Figure 1. Sample view in android application

[Abstract:0095] OP-071 [Other]

Center of excellence for non-muscle invasive bladder cancer: First year experience

İsmail Ulus, Ömer Onur Çakır, Serhat Süzan, İsmail Engin Kandıralı, Ahmet Yaser Müslümanoğlu

Department of Urology, Bağcılar Training and Research Hospital, İstanbul, Turkey

Introduction: Although current literature provides adequate information for the management of bladder cancer patients, challenging follow-up schedule decreases patient compliance for optimal treatment. Suboptimal follow-up increases hospital admissions of the patients with advanced stage disease which leads loss of work power and increases in healthcare costs. For this purpose 'Center of Excellence for Non-Muscle Invasive Bladder Cancer' project has been started in Istanbul Bagcilar Training and Research Hospital. With this report, we aim to cite our first-year experience within this project.

Results: There are few centers of excellence for bladder cancer (University of North Carolina Bladder Cancer Center of Excellence, USA., The Johns Hopkins Greenberg Bladder Cancer Institute, USA) around the whole world. In our center, we have common diagnostic and treatment equipment for bladder cancer in addition to SPIES-OPAL 1 (narrowband and fluorescence imaging), Cook CellVizio (confocal laser endomicroscopic imaging) and Synergo (intravesical thermochemotherapeutic treatment). SPIES, which have four digital imaging modules, and provides more accurate vision without contrast usage compared to white light cystoscopy (Figure 1a). With the study launched within our project, we have shown that SPIES decreases inter-observer variabilities in differently defined bladder lesions under white light cystoscopy. CellVizio creates high definition endomicroscopic images, after injection of contrast medium, concordant with histopathologic analysis (Figure 1b). A prospective trial is in progress within our project, using CellVizio for intraoperative evaluation of upper urinary tract urothelial tumors thought to be suitable for conservative treatment.

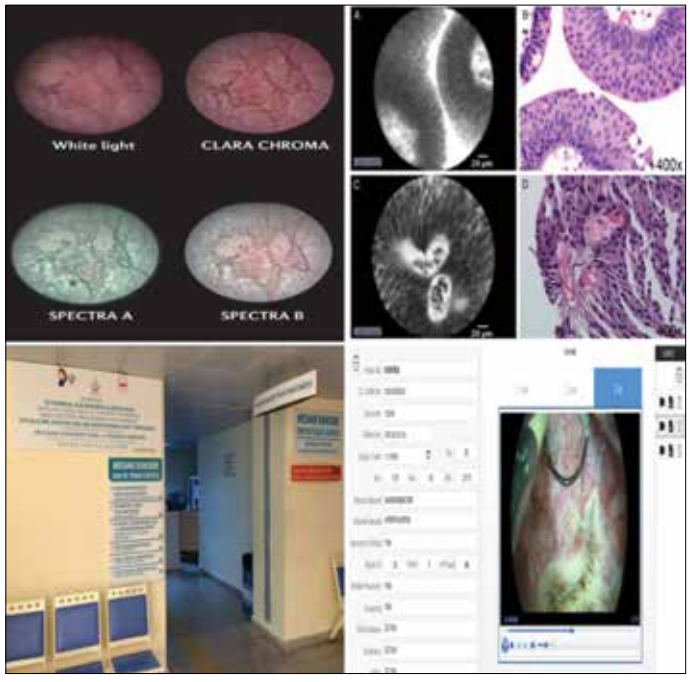


Figure 1. a-d. Comparison of SPIES imaging with white light cystoscopy (a). Cellvizio images for low and high grade tumors corcondant with microscopic view (b). Excellence center for bladder cancer (c) Follow-up programme compatible with hospital database (d)

We are participating in the multicentric study of Bladder EpiCheck conducted in Turkey, a DNA methylation biomarker panel for bladder cancer diagnosis which shown to have a 99.3% negative predictive value and 91.7% sensitivity.

We have a separate physical unit for clinical follow-up of bladder cancer patients (Figure 1c). We use 'File Maker Pro Advanced' based programme, which is compatible with the hospital operating system, for recording patient data (Figure 1d). Clinical follow-up and surgical operations are being executed by two surgeons (Prof. Dr. İsmail Engin Kandıralı, Dr. İsmail Ulus) for all patients. We send SMS messages to patients via the hospital SMS system, warning them 7 and 3 days before their cystoscopy and intravesical treatment appointment. We observed 50% increase in patient compliance to maintenance treatment of BCG compared to former year after initiation of SMS message system. We are developing our multidisciplinary approach with Medical Oncology, Radiation Oncology and Pathology departments.

Conclusion: Loss of power and healthcare costs due to bladder cancer caused morbidity which can be diminished with the development and coordination of similar type of centers. With focusing on multicentric studies of bladder cancer genetics and advanced imaging systems for bladder cancer diagnosis, we may have made important contributions to the literature.

Keywords: Bladder cancer; center of excellence; urology

[Abstract:0361] OP-042 [Upper Urinary System Pathologies-Transplantation]

Vascular solutions in pediatric renal transplantation with multiple arteries

Ali İhsan Dokucu, Cumhur Yesildal, Sinan Levent Kirecci, Hasan Demırıran, Mesut Demir, Abdullah Hızır Yavuzsan, Akıncı Nurver

Health Sciences University Şişli Etfal Training and Research Hospital, İstanbul, Turkey

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

Pediatric kidney transplants certainly have difficulties. Therefore, the risk of vascular and urological complications is high. In the literature, there are limited publications in pediatric transplants as well as descriptions of multivessel anastomosis resolution in adult kidney transplants. In addition to technical difficulties such as vessel diameter mismatch in pediatric transplants, increased thrombosis is of primary importance at risk. Due to the small number of pediatric donors, the use of grafts from cadaveric donors, which usually cannot be planned in advance, requires immediate resolution. We present our solutions and results of pediatric transplants in 4 cases with multiple renal arteries, which our clinic has encountered in the last year.

Aortic Vascular patch (2 arteries)

A 12-year-old boy has a cadaveric donor. During the back table setup 2 arteries were observed that were prepared as an aortic patch. Then only iliac arterial anastomosis was performed. Nine months after the operation his creatinine was 0.82 mg/dL.

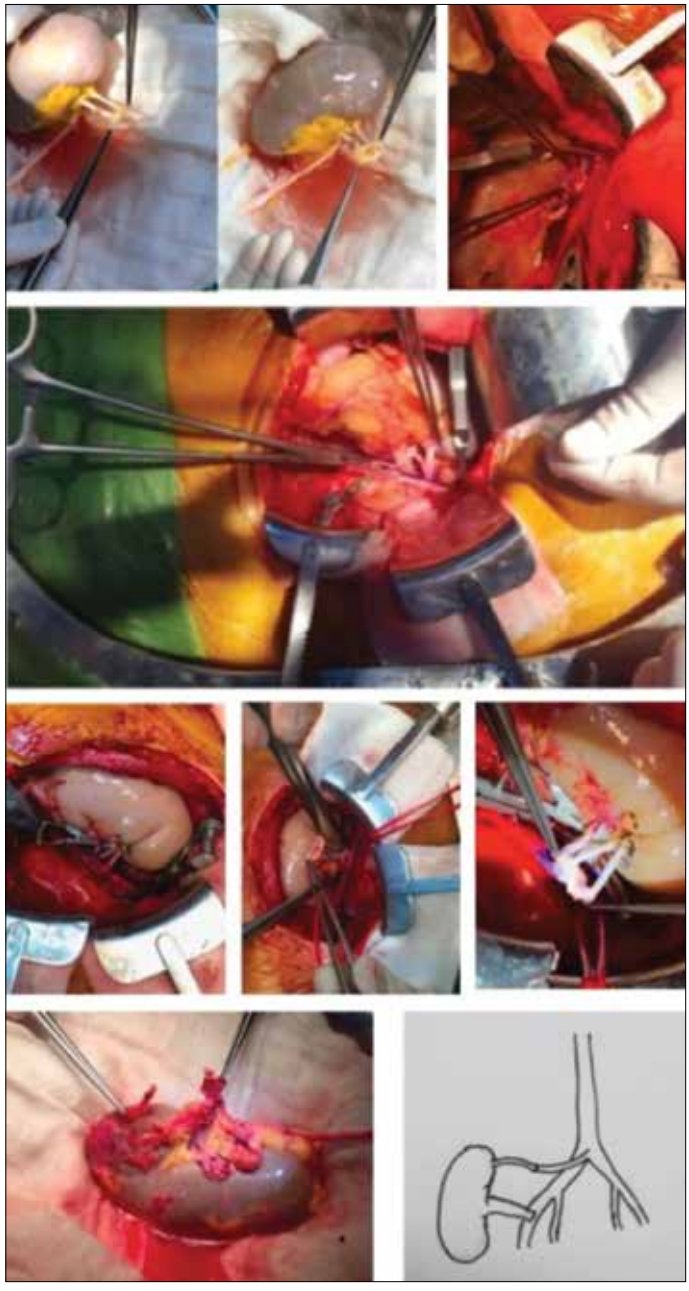


Figure 1. Vascular anomallies and our solutions

Double Renal Artery / End-to-side anastomosis

A 15-year-old boy has a cadaveric donor. During the back table setup a second artery feeding lower part of the kidney observed. Main and secondary arteries were converted to a single artery with an end-to-side anastomosis at the bench then iliac arterial anastomosis performed alone. Nine months after the operation his creatinine was 0.75 mg/dL.

Aortic Vascular patch (3 arteries)

A 14-year-old girl has a cadaveric graft. At the back table, 3 arteries were observed. Two of them were opening through the same ostium. Renal vein were passing through between these three arteries. From three arteries a single 3cm aortic patch was prepared. Then common iliac arterial anastomosis was performed alone. The vein anastomosed to the iliac vein that naturally passed through the window between the arteries. No complication was seen postoperatively. Six months after the operation his creatinine was 0.9 mg/dL.

Anastomosis between upper pole of renal artery-*a. sacralis mediana*

A 12-year-old girl has a live kidney transplant from his father. A 3 mm diameter artery feeding the upper pole detected on the graft. The length of this artery was insufficient for the anastomosis. Therefore *a.sacralis mediana* was transposed and end-to-end anastomosis was performed. No complication was seen postoperatively. 6 month after the operation her creatinine is 0.7.

Vascular variations in kidney are common. In pediatric renal transplantation cases, these variations will make surgical repair more qualified. As a result, multiple arterial structures in pediatric transplants cause technical difficulties but do not adversely affect graft survival if individualized solutions are provided.

Keywords: Arterial variations; pediatric age; renal transplantation.

[Abstract:0440] OP-080 [Operative Techniques (video)-Oncology]

Robotic radical cystectomy with intracorporeal Studer pouch formation for bladder cancer: Outcomes of 96 cases

Bahri Gök[1], Ali Fuat Atmaca[1], Abdullah Erdem Canda[2], Erem Asil[3], Arslan Ardıçoğlu[1], M. Derya Balbay[2]

[1]*Department of Urology, Yıldırım Beyazıt University School of Medicine, Ankara Atatürk Training and Research Hospital, Ankara, Turkey*
[2]*Department of Urology, Koç University School of Medicine, İstanbul, Turkey*
[3]*Department of Urology, Ankara Atatürk Training and Research Hospital, Ankara, Turkey*

Objective: To present the outcomes robotic radical cystectomy (RARC) with bilateral extended pelvic lymph node dissection (BEPLND) and intracorporeal Studer pouch formation for bladder cancer in 96 patients.

Material and methods: Between December 2009 and April 2018, we performed RARC, BEPLND and intracorporeal Studer pouch reconstructionin 90 male and 6 female patients. Patient demographics, operative and postoperative variables, pathological parameters, complications (according to modified Clavien system) and functional outcomes were evaluated.

Results: Mean patient age was 60.8 (31-80) years, American Society of Anesthesiologists score was 1.7 (1-3) and body mass index was 26 (20-31) kg/m^2. Eighteen patients received neoadjuvant chemotherapy. The mean operation time, intraoperative estimated blood loss and median lymph node (LN) yield were 8.27 hours, 330 mL and 28.3, respectively. Median hospital stay was 13.7 days. There was one perioperative death (due to cardiac arrest on postoperative day-21). Lodge drains were removed at a median of 10.1 days. Surgical margins were negative in all patients. Postoperative pathological stages were: pT0 (n=21), pTis (n=7), pT1 (n=7), pT2a (n=14), pT2b (n=14), pT3a (n=15), pT3b (n=10) and pT4a (n=8). Positive LNs and incidental prostate cancer were detected in 20 and 23 patients, respectively. Twenty-three patients received adjuvant chemotherapy. At a median follow-up of 22.5 months, 13 patients died from metastatic disease and 7 from cardiac disease. According to the modified Clavien system, there were 30 minor (Grade 1 and 2) and 20 major (Grade 3-5) complications during the perioperative (0-30 days), and 6 minor and 7 major complications during the postoperative (31-90 days) period. Of the available 60 patients, 36 cases were fully continent, 14 had mild, 6 had moderate and 4 had severe day-time incontinence.

Conclusion: Due to our experience, RARC with BEPLND and intracorporeal Studer pouch reconstruction procedures are complex procedures with tolerable morbidity, excellent surgical and pathological outcomes and satisfactory oncologic and functional results.

Keywords: Bladder cancer; intracorporeal urinary diversion; robotic cystectomy.

[Abstract:0561] OP-105 [Urinary System Stone Disease - Diagnosis (Experimental)]

Cytokine response in kidney stone patients undergoing percutaneous nephrolithotomy vs flexible ureteroscopy

Tzevat Tefik[1], Samed Verep[1], Hayriye Şentürk Çiftçi[2], Selçuk Erdem[1], Öner Şanlı[1], Faruk Özcan[1], İsmet Nane[1]

[1]*Department of Urology, İstanbul University İstanbul School of Medicine İstanbul, Turkey*
[2]*Department of Medical Biology, İstanbul University İstanbul School of Medicine İstanbul, Turkey*

Objective: Kidney stones have been treated using different treatment options including percutaneous nephrolithotomy (PCNL) or retrograde intrarenal surgery (RIRS). PCNL is considered to have decreased stone-free (SF) but higher complication rates, whereas FURS is less invasive with lower SF rates. Trauma or operations induce reduction in some cytokines such as IFN-gamma and increase in others such as IL-8. On the other hand, macrophages having important role in preventing kidney stone disease, secrete cytokines such as IL-8. In this study we evaluated the surge of these cytokines during and after PCNL and RIRS procedures.

Material and methods: Patients undergoing either standard PCNL (n=12, 30 F amplatz sheet, duration of operation 120 min) or RIRS (n=8, 10-12 ureteral access sheet, duration of operation 120 min) for kidney stones were recruited for the study. Serum samples before, at the end of the operation, and at 6th, 24th and 48th hours after the operation were obtained.

Results: The median ages of the patients were 51.5 (IQR, 46-63) and 60 (IQR, 53.5-65) years for the PCNL and RIRS groups, respectively. FSix patients were female in PCNL and 3 in RIRS groups. Right sided stones were 5 in both groups. Stone size was comparable that were 23±10.4 mm and

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

19.8±14.3 mm in PCNL and RIRS groups respectively (p=0.564). SF rates were 58.3% for PCNL and 62.5% for RIRS after 1st session. The preoperative and all postoperative values of IL-8 were not different among PCNL and RIRS groups. Neither IFN-gamma reached statistical significance among groups. Patients rendered SF had higher levels of IL-8 at 48 hours following intervention compared to patients with rest kidney calculi regardless of the procedure (89.3±31.4 pg/mL vs 60.9±17.5 pg/mL, p=0.41).

Conclusion: Systemic response of the body to PCNL and RIRS procedures seems to be equal. Patients with residual calculi have lower level of IL-8 which may indicate higher consumption of IL-8 in this group of patients regardless of the procedure.

Keywords: Cytokine; nephrolithiasis; percutaneous nephrolithotomy; retrograde intrarenal surgery.

[Abstract:0588] OP-010 [Urinary System Stone Disease-Treatment (SWL, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Effect of pediatric extracorporeal shock wave lithotripsy (ESWL) treatment on the quality of life of the patient

Metin Savun, Fatih Yanaral, Ufuk Çağlar, Faruk Özgör, Mehmet Fatih Akbulut, Şeref Başal, Ömer Sarılar

Department of Urology, Haseki Training and Research Hospital, İstanbul, Turkey

Objective: To investigate the effect of pediatric extracorporeal shock wave lithotripsy in patients with urinary system stone disease on their quality of life including physical, emotional, social, and school functioning.

Material and methods: Between March 2018 and July 2018, 36 children undergoing SWL were included in the study. An electromagnetic generator (Dornier Compact Sigma model device, Dornier MedTech, Wessling, Germany) was used for extracorporeal shock wave lithotripsy procedures and all of them were performed by an expert single urologist. For all pediatric patients, "Quality of Life Quality Scale for Children' questionnaires appropriate for their ages were prepared, and completed by their parents before, 3 day and 2 weeks after the extracorporeal shock wave lithotripsy procedure.

Results: A total of 36 children (15 female and 21 male) were included in the study. The mean age of the patients was 70.1 months and the average size of the stones was 10.2 mm. After the first SWL session, average stone-free rate was 63.9% (23 patients). On the 3rd day after the extracorporeal shock wave lithotripsy procedure, the quality of life scores were significantly lower than when compared with previous preprocedural scores ($p < 0.05$). The quality of life scores at 2 weeks after the extracorporeal shock wave lithotripsy procedure was significantly higher than total quality of life scores and also all subgroup quality of life scores estimated before extracorporeal shock wave lithotripsy too ($p<0.05$).

Conclusion: Within the first few days, possibly due to passage of stone fragments, pediatric extracorporeal shock wave lithotripsy adversely effects the quality of life. On the other hand, it effects the quality of life of the children favourably in the second week after extracorporeal shock wave lithotripsy. Parameters positively affecting quality of life are as follows: age: 2-7 years, lower calyceal stone, stone size <1 cm, stone free status. However, the only factor that affects the quality of life negatively is the stone size.

Keywords: Pediatric SWL; quality of life; urinary system stone disease.

[Abstract:0037] OP-036 [Pediatric Urology]

Is there any effect of termination type of desmopressin treatment at relapse rates in monosyptomatic enuresis treatment?

Yaşar Issı[1], Ünal Bıçakcı[2], Rüştü Cankon Germiyanoğlu[3]

[1]*Department of Pediatric Urology, Cengiz Gökçek Obstetrics and Pediatrics Hospital, Gaziantep, Turkey*
[2]*Department of Pediatric Surgery, Division of Pediatric Urology, Ondokuz Mayıs University School of Medicine, Samsun, Turkey*
[3]*Department of Pediatric Urology, Ondokuz Mayıs University School of Medicine, Samsun, Turkey*

Objective: We investigated the effect of withdrawal of desmopressin, which plays major role in the treatment of Monosymptomatic Enuresis (MNE), and whether or not it has an effect on high relapse rates, which is the most important problem in the management of the MNE affecting greater number of patients.

Table 1. Demographic distributions of patients			
		Group 1 (n:209)	Group 2 (n:238)
Gender	Male	127	126
	Female	82	112
Age (year)	5-7	83	95
	8-10	79	85
	11-14	43	53
	>14	4	5
Nationality	Turkish	178	201
	Syrian	31	37

Material and methods: Gaziantep region has a huge population of children due to its crowded population and the war in Syria and its neighborhood. It is also an endemic city in terms of enuresis. Since it is the only pediatric urology clinic in the city, all enuretic children are referred to our polyclinic. Between October 2016 and April 2018, 1013 patients were admitted with complaints of bedwetting. The age range of the patients was 5-17 years (mean: 8,56). After exclusion of patients who did not respond to treatment and also had other exclusion criteria (NMNE, non-follow-up), 447 MNE patients were treated with oral desmopressin lyophilisate (MELT) at 120 mcg/day for three months. After 3 months the treatment was terminated in two ways: Direct cessation of desmopressin (Group 1 n: 209) and structured withdrawal group (Group 2 n: 238). In Group 2, patients took the desmopressin every other day for 15 days. All patients were called up for control one month after the drug was withdrawn and the relapse rates were recorded.

Results: After one month of treatment with MELT in 253 male and 194 female patients, relapse rates in Groups 1, and 2 were 42.5% (89/209) and 41.1% (98/238) respectively (p>0.05).

Conclusion: This study performed with the highest number of patients in the literature, showed that the method of terminating desmopressin treatment has no statistical significance in MNE management.

Keywords: Desmopressin termination; enuresis; relaps.

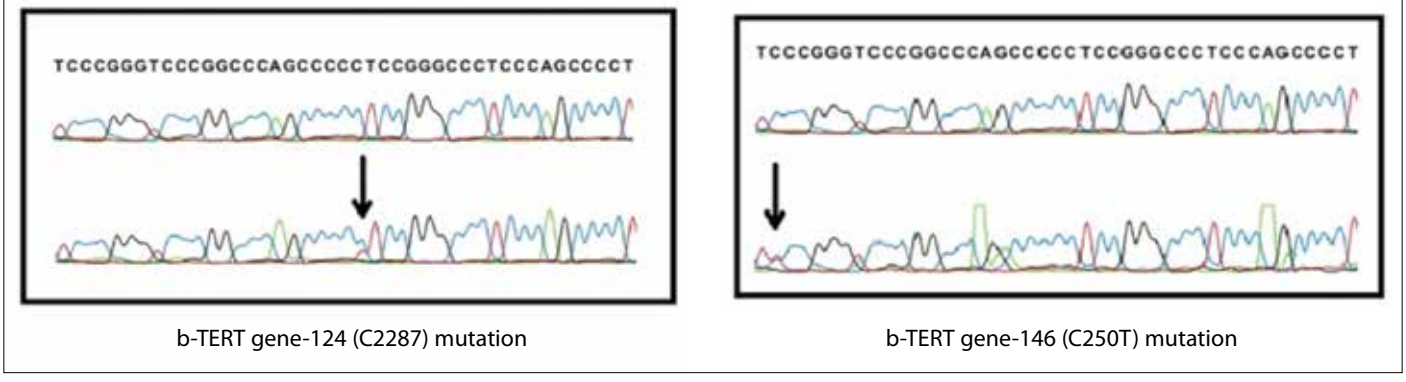
[Abstract:0211] OP-075 [Urothelial Cancers-Diagnosis]

The role of human telomerase reverse transcriptase (h-TERT) gene promoter mutation in bladder cancer patients

Kadir Acıbucu[1], Efe Önen[1], Orhan Görükmez[2], Murat Şambel[1], Volkan Çağlayan[1], Sinan Avcı[1], Ahmet Tugay Yıldırım[1], Metin Kılıç[1], Mustafa Murat Aydos[1], Sedat Öner[1]

[1]Department of Urology, University of Health Sciences Bursa Yüksek İhtisas Training and Research Hospital, Bursa, Turkey
[2]Department of Medical Genetics, University of Health Sciences Bursa Yüksek İhtisas Training and Research Hospital, Bursa, Turkey

Objective: Bladder cancer is the second most common cancer of the genitourinary system. Non-muscle-invasive bladder cancer is also characterized by high recurrence rates. Therefore, it is a disease that needs frequent monitorization. Because of the gold standard method of cystoscopy is made following development of bladder cancer, there is a need for a noninvasive marker that can predict recurrence and progression. In this study, we investigated the effect of the h-TERT promotor gene mutation in the preidction of bladder cancer recurrence and progression.



b-TERT gene-124 (C2287) mutation

b-TERT gene-146 (C250T) mutation

Figure 1. Representing the h-TERT-124 (C228T) and h-TERT-146 (C250T) mutation sequences.

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

Material and methods: A total of 89 patients, aged 18 years or older, who were referred to the Urology Clinic between January 2018 and March 2018, and followed up for the suspect bladder cancer were enrolled in this study. In this prospective study, patients urinated morning prior to cystoscopy and urine volumes collected were centrifuged. Next, h-TERT promotor gene mutation analysis was performed acording to the TERT-124 (C228T) and TERT-146 (C250T) mutation sequence in the Department of Medical Genetics (Figure 1). After this, the results of h-TERT analysis and cystoscopy and pathology were compared.

Results: In the study, h-TERT mutation was detected in 15 (39%) of 38 patients with pathologically confirmed bladder cancer. In 51 patients without recurrence, h-TERT mutation was observed in 2 patients. There was no correlation between patient age and presence of hTERT mutation (p=0.363). There was a positive correlation between male gender and hTERT, but no statistically significant correlation was found with *chi*-square test (Pearson-square p value=0.165). There was no significant relationship between smoking and the presence of hTERT mutation (Pearson-square p value=0.392). No statistically significant differences were found between familial cancer history, tumor width and tumor number and h-TERT mutation (Table 1). In addition, there was a significant linear correlation between the increase in the size of the last tumor and hTERT positivity (p=0.01).

Conclusion: Bladder cancer is a disease that requires frequent and regular follow-up because of frequent recurrence. Following bladder cancer recurrence and progression, several markers have been studied so far. However, in patients with bladder cancer, a noninvasive procedure (such as detection of tumor markers in blood and urine) is recommended in patients with higher sensitivity and specificity to avoid the need for an invasive procedure such as cystoscopy). In our study, we found that the h-TERT gene was less sensitive than the previous studies. The high specificity ratio led to the idea that the h-TERT promoter gene mutation should be studied with more sensitive methods.

Keywords: Bladder tumor; cystoscopy; promotor; recurrence; telomerase.

Table 1. Data on demographic and hTERT genetic evidence

		n	hTERT positive	hTERT negative	p
Mean age (year)			64.71 (50-85)	64.92 (42-88)	0.363
Gender	Female	8	3	5	0.165
	Male	81	14	67	
Smoking		72	15	57	0.392
Familial cancer presence		3	1	2	0.524
Recurrence according to last pathology	Recurrence positive	38	15	23	0.000
	Recurrence negative	51	2	49	
Tumor stage according to last cystoscopy	No reccurence	50	2	48	0.103
	Ta	15	5	10	
	T1	10	4	6	
	T2	12	6	6	
	CIS	1	0	1	
	Urothelial papillom	1	0	1	
Pathologic grade according to last cystoscopy	No reccurence	51	2	49	0.09
	Low grade	18	5	13	
	High grade	19	10	9	
	CIS	1	0	1	
Tumor burden according to the last cystoscopy	No mass	28	0	28	0.08
	Suspicious area	20	3	17	
	1 mass	24	7	17	
	2 mass	5	1	4	
	Multiple	12	6	6	
Total tumor width according to the last cystoscopy	No mass	28	0	28	0.77
	Suspicious area	20	3	17	
	Under 1 cm	7	1	6	
	1-3 cm	15	3	12	
	Above 3 cm	19	10	9	

[Abstract:0766] OP-034 [Experimental Urology-Oncology]

Comparison of mTOR and mLST8 molecules in prostate cancer stem cell culture and stem cell-free prostate cancer cell culture with immunofluorescence

Zafer Binal[1], Fuat Kızılay[1], Eda Açıkgöz[2], Gülperi Öktem[2], Barış Altay[1]

[1]*Department of Urology, Ege University School of Medicine, İzmir, Turkey*
[2]*Department of Histology and Embryology, Ege University School of Medicine, İzmir, Turkey*

Objective: Prostate cancer is the second most common cancer-related death in men. Investigation of the characteristics of cancer stem cells and the identification of the pathways involved in the development of cancer are important in the development of targeted treatment modalities. The mTOR pathway is actively involved in prostate cancer. The mTOR and mLST8 molecules are found in both mTOR1 and mTOR2 complexes. The aim of this study is to compare the intensity of mTOR and mLST8 molecules in stem cell-free (Du-145 non-CSC) prostate cancer cell line culture with stem cell-containing prostate cancer cell culture (Du-145 CSC) as assessed by immunofluorescence staining methods.

Material and methods: Prostate cancer cell line (Du-145) was cultured in an incubator at 37°C in 5% CO_2 environment in cell culture flasks. Using flow cytometry analysis with fluorescence activated cell sorting (FACS), cancer stem cells containing CD133+/ CD44+/low surface markers (sorting) in the Du-145 prostate cancer cell line and the remaining cells (non-sorting) were separated into 5 mL polystyrene tubes containing 2 mL RPMI 1640 medium. Du-145 CSC and Du-145 non-CSCs were visually analyzed for both cell viability (DAPI method) and the intensity of fluorescence in mTOR and MLST8 proteins using the immunofluorescence staining method. The t-test was used as a statistical method and $p<0.05$ was considered statistically significant.

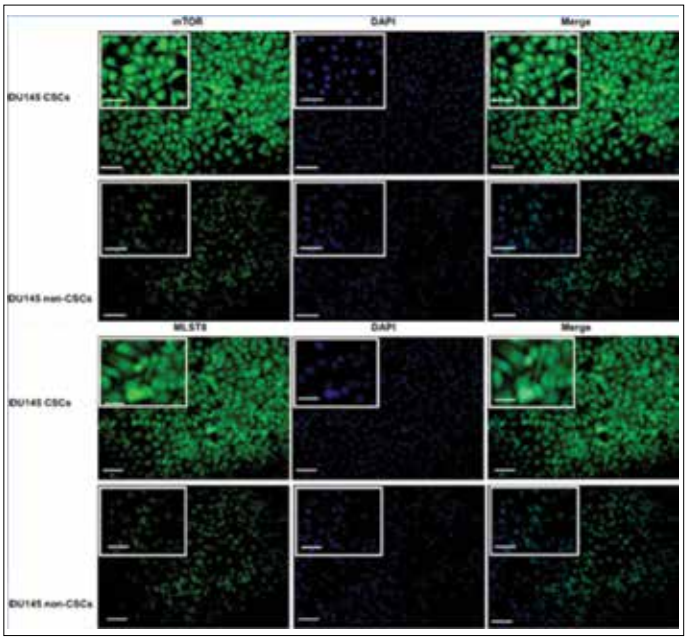


Figure 1. DU-145 CSCs and DU-145 non--CSCs changes in the mTOR and MLST8 protein

Results: Changes in mTOR and MLST8 proteins in Du-145 CSC and Du-145 non-CSCs were examined by immunofluorescence staining method. When compared to DU-145 non-CSC, there was an increase in fluorescence of mTOR and MLST8 proteins in DU-145 CSC. Intensity values of the immunofluorescence images of mTOR and mLST8 were calculated using the ImageJ program, an image analysis program. The intensity values of immunofluorescence images of mTOR protein in Du-145 CSC and Du-145 non-CSCs were compared. The intensity values of mTOR and MLST8 proteins in the prostate cancer stem cell were statistically significant (Figure 1 and Table 1).

Conclusion: This significant increase in the mTOR and MLST8 proteins in the prostate cancer root cells may be an important part of the determination of treatment and prognosis. It is possible to develop targeted therapies by conducting studies on mTOR pathway.

Keywords: Cancer cell line (Du-145); cancer stem cell; mTOR; MLST8.

Table 1. Comparison of the groups

Variables	Groups	n	Mean	Std. Deviation	Std. Error Mean	p
mTOR mean intensity	DU145 CSCs	100	176.6	31.2	3.1	0.0001
mTOR mean intensity	DU145 non-CSCs	100	53.8	27.1	2.7	0.0001
MLST8 mean intensity	DU145 CSCs	100	167.2	21.6	2.2	0.0001
MLST8 mean intensity	DU145 non-CSCs	100	16.6	16.0	1.6	0.0001

T-test was used. $p<0.05$ was considered statistically significant.

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

[Abstract:0717] OP-067 [Andrology Erectile Dysfunction (Men, Women) Treatment]

Does the penile plication contribute to incisional venous patch surgery in Peyronie disease patients who had severe and multiple curvatures?

Bülent Erol, Ferhat Keser, Özgür Efiloğlu, Furkan Şendoğan, Hüseyin Özgür Kazan, Ömer Faruk Memiş, Turhan Çaşkurlu

Department of Urology, Medeniyet University Göztepe Training and Research Hospital, İstanbul, Turkey

Objective: Incisional venous patch (IVP) and tunical plication are the surgical options in surgery of Peyronie's disease. In this study, patients who had severe (>60°) and/or multiple curvatures underwent IVP surgery alone and outcomes of IVP with concomitant plication surgery were evaluated.

Material and methods: Patients who had undergone surgery for severe Peyronie's curvature were evaluated retrospectively between 2013 and 2017. Surgical techniques, preoperative and postoperative penile deformity angles, International Index of Erectile Function (IIEF) scores, and penile lengths were evaluated.

Results: A total of 20 patients were included in the study. The median age of the patients was 58.4 (47-77) years. Median preoperative penile curvature angle was 69.5° (60°-90°) and multiple curvatures (≥2) were present in 3 patients. Simultaneous tunical plication were performed in 14 patients (70%). All demographic data are given in Table 1. Three patients had multiple curvatures, while others had 2 of 90° (n:2), 80° (n:2), 70° (n=2), and 60° (n:4) curvatures. Postoperative median follow-up period was 3.5 years. There were significant improvements in penile curvature degrees of patients (p=0,000). In 13 patients (65%) penile curvatures were completely straightened. Besides, among a total of 6 patients (33.3%) who did not undergo plication, residual curvatures of <20° (n:2) >20° (n=1) were observed. In 4 (28.5%) of 14 patients who underwent penile plication had <20° residual curvature, while >20° residual curvature was not observed in any of these patients. Complete recovery was observed in 50% of patients underwent IVP surgery alone and in 71% of the patients underwent IVP with plication surgery. Patients who underwent penile plication had an average shortening of 1.4 cm in penile length. There was no significant change in IIEF scores in both groups (p=0.189).

Conclusion: Concomitant penile plication with IVP surgery in patients who had severe or multiple curvatures may cause penile shortening while increasing the rate of complete recovery. Adequate information should be given prior to surgery in terms of penile shortening.

Keywords: Peyronie's disease, curvature, plication, incisional venous patch.

Table 1. Preoperative and postoperative curvature angles, IIEF scores and shortening of penile length of the patients

Number of patients (n)	20	
Age (year, range)	58.4 (47-77)	
Tunical plication (n)	14	
Incisional venous patch (n)	20	
IIEF (mean)		
Preoperative	15.45±5.85 (5-25)	p: 0.189
Postoperative	17.2±3.90 (10-25)	
Penile curvature angle (mean)		
Preoperative	70.25°±11.29 (60°-90°)	p: 0.000
Postoperative	5°±11.47 (0°-50°)	
Penile curvature angle (Plication +) (n)	14	p: 0.000
Preoperative	70.3°±11.8	
Postoperative	1.7°±3.1	
Penile curvature angle (Plication-) (n)	6	p: 0.002
Preoperative	70°±10.9	
Postoperative	12.5°±19.4	
Complete straightened (n)	13 (65%)	
Residual curvature <20° (n)	6 (30%)	
Plication (+)	4 (20%)	
Plication (-)	2 (10%)	
Residual curvature >20° (n)	1 (5%)	
Shortening in penile length (mean, cm)	1.4±0.3	
Follow-up period (years)	3.5±0.8 (1-5)	

[Abstract:0388] OP-077 [Localized Kidney Tumors Diagnosis and Treatment]

The effect of ABO blood group and blood-based biomarkers on the growth kinetics of renal angiomyolipoma

Burak Arslan[1], Okan Gürkan[2], Buğra Çetin[1], Öykü Aksoy Arslan[3], Taha Göv[1], Gökhan Yazıcı[1], Tolga Eroğlu[1], Mustafa Asım Avcı[1], Enver Özdemir[1]

[1]Department of Urology, Gaziosmanpaşa Taksim Training and Research Hospital, İstanbul, Turkey
[2]Department of Radiology, Gaziosmanpaşa Taksim Training and Research Hospital, İstanbul, Turkey
[3]Department of Haematology, Kanuni Sultan Süleyman Training and Research Hospital, İstanbul, Turkey

Objective: Although several studies have demonstrated the association between blood group antigens and renal cell carcinoma, the association between the ABO blood groups and renal angiomyolipoma (AML) has not been investigated. The aim of our study is to investigate the impact of the ABO blood groups and blood-based biomarkers on the growth kinetics of renal AML.

Material and methods: A total of 124 patients with AML who were followed-up between February 2010 and June 2018, were retrospectively reviewed. Of the 124 patients, 9 patients were excluded from the study because of pregnancy, partial nephrectomy due to acute bleeding, hepatic disease, and irregular follow-up. The patients' characteristics, including age, body mass index (BMI), blood pressure, smoking history, and ABO blood group were recorded. Baseline laboratory test results, including serum creatinine, AST, ALT, platelet, neutrophil and lymphocyte counts were used to calculate the estimated glomerular filtration rate (eGFR), neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), and De Ritis ratio (AST/ALT ratio). Almost all patients had received their first diagnosis of AML incidentally after an ultrasound imaging or computerized tomography (CT) scan. Patients underwent serial contrast-enhanced CT or magnetic resonance imaging (MRI) every 6 months for the first 2 years and annually in later years. The receiver operating characteristic (ROC) curve was used to determine the predictive cut-off value of the NLR, PLR, and De Ritis ratio. The Cox proportional hazards regression model was used to evaluate the relationship between variables and tumor growth.

Table 1. Cox proportional hazards regression analysis for tumor growth

		Univariate analysis			Multivariate analysis		
Parameters		**HR**	**95%CI**	**p**	**HR**	**95%CI**	**p**
Age (year)	<50	1(Ref)	0.81-1.15	0.497			
	≥50	0.86					
Sex	Male	1(Ref)	0.69-1.98	0.229			
	Female	1.46					
BMI	<25	1(Ref)	0.71-2.18	0.116			
	≥25	0.88					
HT	Absent	1(Ref)	1.72-3.91	0.042	1(Ref)	0.96-2.03	0.102
	Present	2.43			1.99		
DM	Absent	1(Ref)	0.79-1.19	0.715			
	Present	1.15					
Smoking	Never	1(Ref)	1.07-2.21	0.154			
	Current or former	1.53					
eGFR	≥60	1(Ref)	1.57-5.18	0.039	1(Ref)	1.39-4.91	0.044
	<60	3.41			3.03		
Laterality	Left kidney	1(Ref)	0.77-1.36	0.381			
	Right kidney	1.18					
Tumor localisation	Peripheral	1(Ref)	1.49-6.44	0.025	1(Ref)	1.41-6,31	0,030
	Central	3.49			3.15		
Initial presentation	Incidentally	1(Ref)	0.62-1.28	0.557			
	Symptomatic	0.92					
ABO blood group	Non-0 group	1(Ref)	1.12-8.72	0.021	1(Ref)	1.51-7,17	0.038
	0 group	4.31			3.97		
Rhesus factor	Positive	1(Ref)	0.83-1.29	0.742			
	Negative	1.19					
NLR	<2.2	1(Ref)	0.69-2.25	0.394			
	≥2.2	1.87					
De Ritis ratio	<1.24	1(Ref)	1.612-6.79	0.029	1(Ref)	1.42-7.04	0.047
	≥1.24	3.55			3.43		
PLT	<119	1(Ref)	1.02-1.82	0.618			
	≥119	1.23					

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

Results: The study population comprised 71 women and 44 men with a median age of 47.3 (28-65) years. Blood group distribution of the patients was as follows: A=38.3%, B=18.2%, AB=11.3%, and O=32.2%. No significant differences were observed among patients classified according to the blood groups regarding age, BMI, smoking history, co-morbidities, NLR, PLR, De Ritis ratio, eGFR, or tumor size and localisation. The mean growth rate from baseline to the last scan was 0.36±0.27 cm, 0.21±0.21 cm, 0.14±0.11 cm, and 0.19±0.17 cm for blood types O, A, B, and AB, respectively. Progression of tumor size is illustrated in Figure 1. Four patients who had tumors >4 cm in diameter in their follow-up schedule were recommended to undergo prophylactic intervention but they prefer to remain on surveillance. Based on the ROC curve analysis, 2.2, 1.24, and 119 were identified as an optimal cut-off value for the NLR, De Ritis ratio, and PLR, respectively. In multivariate analysis, eGFR of less than 60 mL/min/1.73m^2 (HR=3.03, p=0.044), central tumor localisation (HR=3.15, p=0.030), presence of blood group-0 (HR=3.97, p=0.038), and De Ritis ratio ≥1.24 (HR=3.43, p=0.047) were statistically associated with tumor growth (Table 1).

Conclusion: The current study demonstrates that both the ABO blood group and the De Ritis ratio might represent independent predictors of tumor growth rate in patients with renal AML. The use of these biomarkers in combination with imaging techniques might facilitate the clinical decision-making process for urologists.

Keywords: Angiomyolipoma; biomarkers; blood group antigens.

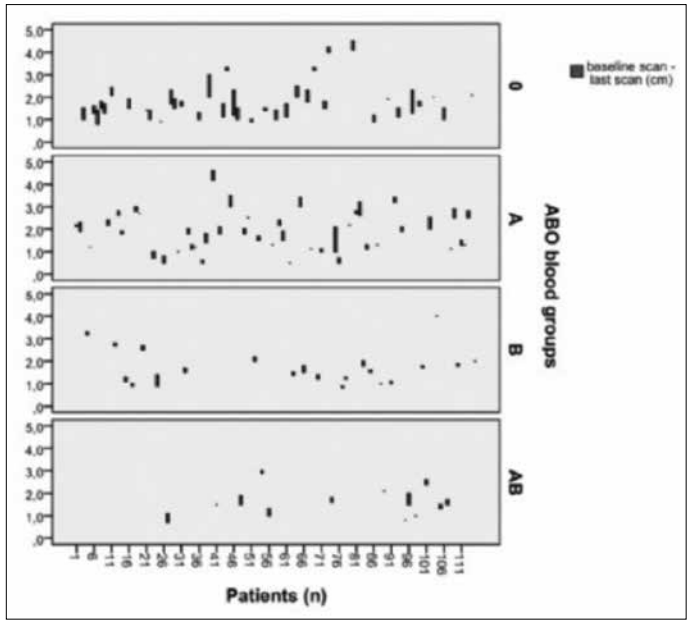


Figure 1. Mean tumor growth rate of patients
Mean tumor diameter increase (cm) between patients' initial diagnosis and last scan

[Abstract:0262] OP-095 [Urinary System Stone Disease-Treatment (SWL, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

Can perinephritic stranding predict spontaneous passage of distal ureteral stones?

Şakir Ongün[1], Murat Dursun[2]

[1]*Department of Urology, Balıkesir University School of Medicine, Balıkesir, Turkey*
[2]*Department of Urology, Malatya Training and Research Hospital, Malatya, Turkey*

Objective: The choice between watchful waiting and active management until spontaneous passage is the main problem for the urologist when managing patients with ureteral stones. The decision to use expectant treatment depends on various factors, including the size of the stone, its location and patient preference. Perinephritic stranding is a secondary sign of acute ureteral obstruction and it is hypothesized that perinephritic stranding may be related to pyelovenous and pyelolymphatic backflow. The study aimed to investigate the relationship between the spontaneous passage of distal ureteral stones and perinephritic stranding.

Material and methods: The study included 196 patients with acute renal colic between January 2017 and December 2017, and distal ureteral stones of 10 mm or less in a non-contrast computed tomography were comprised in a retrospective study. The stone-passage rate and time, and different clinical, laboratory and radiological variables, were analysed. Statistical analysis of the data was performed SPSS software 22.0 (IBM Corp., Armonk, NY, USA). Statistical significance was accepted as p<0.05 for t-test and Chi-Square tests.

Results: Of the 196 patients, 61 were women and 135 were men, with a mean age of 37.04±11.2 years. The average stone size of the patients was 4.77±1.53 mm for the largest transverse diameter and 4.76±1.92 mm for the largest sagittal diameter. The mean anteroposterior (AP) pelvic diameter was 14.97±6.13 mm. After 4 weeks of follow-up, 136 patients (69.3%) had passed their stones spontaneously whereas 60 (30.6%) had not (48/60 of them underwent ureterorenoscopy). On non-contrast computed tomography 104 (53.06%) patients had perinephritic stranding. Spontaneous passage was found to be 58.6% (61/104) and 81.5% (75/92) in patients with, and without perinephritic stranding, respectively. In chi-square analysis patients with and without perinephritic stranding were compared for spontanoues passage rates and a p value of <0.001 was

found. Stone sizes and AP pelvic diameter was higher in patients with perinephritic stranding (p<0.001). Spontaneous stone passage rates, stone sizes and AP pelvic diameter of patients with/without perinephritic stranding are given in Table 1.

Conclusion: Although our study found that stone size of the patients with perinephritic stranding were larger, we believe that perinephritic stranding can be beneficial in predicting the potential spontaneous passage of distal ureteral stones.

Keywords: Perinephritic stranding; spontaneous passage; ureteral stone.

Table 1. Spontanoues passage rates, stone sizes and AP pelvic diameter of patients with/without perinephritic stranding

	Perinephritic stranding (+) (n=104)	Perinephritic stranding (-) (n=92)	p
Spontaneous passage	61/104 (58.6)	75/92 (81.5)	<0.001
Stone size (width) (mm)	5.14±1.77	4.34±1.06	<0.001
Stone size (lenght) (mm)	5.18±2.00	4.28±1.70	<0.001
Anteroposterior pelvic diameter (mm)	16.8±6.8	12.8±4.4	<0.001

[Abstract:0712] OP-050 [Experimental Urology-Others]

Protective effects of dantrolene and methylprednizolone against spinal cord injury induced early oxidative damage in rabbit bladder: A comparative experimental study

İbrahim Keleş[1], Mehmet Fatih Bozkurt[2], Erdoğan Ağlamış[3], Abdurrahman Fatih Fidan[4], Cavit Ceylan[5], Mustafa Karalar[1], Soner Çoban[6], Barış Denk[4], Mehmet Emin Büyükokuroğlu[7]

[1]*Department of Urology, Afyon Kocatepe University School of Medicine, Afyonkarahisar, Turkey*
[2]*Department of Pathology, Afyon Kocatepe University School of Veterinary Medicine, Afyonkarahisar, Turkey*
[3]*Clinics of Urology, Health Sciences University, Elazığ Training and Research Hospital, Elazığ, Turkey*
[4]*Department of Biochemistry, Afyon Kocatepe University School of Veterinary Medicine, Afyonkarahisar, Turkey*
[5]*Clinics of Urology, Health Sciences University Yüksek İhtisas Training and Research Hospital, Ankara, Turkey*
[6]*Clinics of Urology, Health Sciences University Şevket Yılmaz Training and Research Hospital, Bursa, Turkey*
[7]*Department of Pharmacology, Sakarya University School of Medicine, Sakarya, Turkey*

Objective: Spinal Cord Injury (SCI), may cause dysfunction in the bladder and many distal organs due to systemic inflammatory response and oxidative stress-related injury. We investigated the preventive effect of dantrolene and methylprednisolone on stress-induced tissue damage in bladder of a rabbit exposed to spinal cord trauma.

Material and methods: A total of 35 rabbits were included into this study and they were divided into 5 groups. Group I control, Group II only SCI, Group III SCI and Dantrolene, Group IV SCI and Methylprednisolone, Group V SCI and Dantrolene+Methylprednisolone. Twenty-four hours after spinal cord trauma, bladder of these rabbits were removed and the histopathologic changes in the bladder under a light microscope were examined. Besides, malondialdehyde, glutathione and nitric oxide levels were evaluated as antioxidant agents both in bladder tissue and in blood.

Results: Compared with the control group, there was an increase in edema and congestion in all groups. The least amount of edema was observed in the group receving dantrolene and the least amount of congestion was observed in the group receving combined treatment. No superiority was found between the drug-receiving groups in terms of reducing malondialdehyde level in blood and tissue after spinal cord trauma. The most successful group was the group that received combined drug therapy to treat increased blood glutathione level which was significantly decreased after spinal cord trauma. After spinal cord trauma, blood nitric oxide level increased significantly in all groups. Nitric oxide levels in the bladder tissue significantly decreased in the groups receiving dantrolene and combination therapy and fell under the level found in the control group.

Conclusion: Dantrolene and methylprednisolone may have potential benefits against oxidative damage in the bladder after spinal cord injuries with their anti-inflammatory and antioxidant effects. In particular, the combined use of dantrolene and methylprednisolone at different doses may be considered as a treatment strategy.

Keywords: Anti-inflammatory; antioxidant; dantrolene; methylprednisolone; spinal cord injury.

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

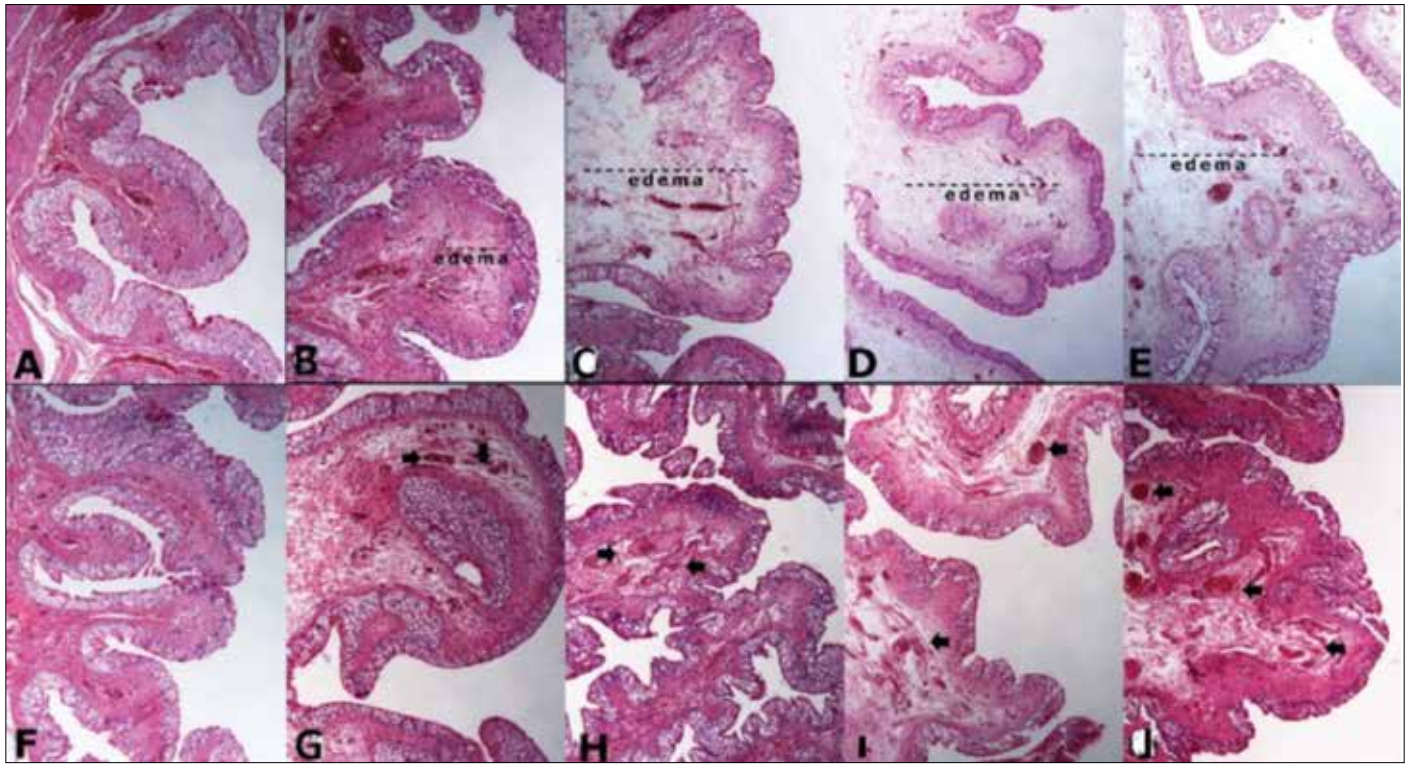


Figure 1. a-j. Histopathological view of group in terms of edema and congestion. (a) Control group no edema, (b) Mild-modarate edema. (c-e) Severe edema. (f) Control group no congestion, (g) Mild congestion. (h-j) Modarate congestion (arrows). HE. x40

[Abstract:0525] OP-061 [Experimental Urology-Andrology]

Histopathological effects of β-hCG and vitamin-C on the detorsioned rat testicles

Cemil Kutsal[1], Hüsam Barhoom[2], Ahmet Albayrak[1], Musab İlgi[1], Sinan Levent Kireççi[1], Soner Güney[1], Nurettin Cem Sönmez[1], Cumhur Yeşildal[1], Emre Aykanlı[1], Kadir Cem Günay[1], Semih Türk[1], Ali İhsan Dokucu[2]

[1]*Department of Urology, Health Science University Şişli Hamidiye Etfal Traning and Research Hospital, İstanbul, Turkey*
[2]*Department of Pediatric Surgery, Health Science University Şişli Hamidiye Etfal Traning and Research Hospital, İstanbul, Turkey*

Objective: Testicular torsion is one of the major urological emergencies and may end in infertility if not treated properly. The primary pathophysiology of testicular torsion is ischemia-reperfusion injury. In this study, we investigate the effects of β-hCG, vitamin C, or combination of both on ischemia-reperfusion injury after surgical treatment of testicular torsion.

Material and methods: A total of 25, eight year-old, male Wistar Albino rats were used. They were divided into 5 groups as follows: Group 1: Control group; Group 2: torsion/detorsion (TD) group, without any medical intervention. Group 3, only vitamin-C group; Group 4:, only β-hCG; Group 5: β-hCG + vitamin-C combination after TD. In Group 1, left orchiectomy was performed only. In Group 2, through a midscrotal incision left testicles were torsioned. After four hours the testicles were detorsioned. Afterwards left orchiectomy was performed. In Group 3 as a treatment, 30 mg of vitamin-C was administered once a week for 3 weeks after a four-hour-long TD session applied on the left testicle. In Group 4, 75 IU β-hCG was administered once a week for 3 weeks after a four-hour-long TD session applied on left testicle. In Group 5, 75 IU β-hCG + 30 mg vitamin-C administered once a week for 3 weeks after a four-hour-long TD session applied on left testicle. After 3 weeks left orchiectomy was performed in the Groups 3,4, and 5. The specimens were evaluated regarding histologic stage, diameter of seminiferous tubule, thickness of germinal membrane layer, testicular weight, testicular atrophy, and necrosis.

Results: There was a statistically significant difference between the mean values of the histopathological stages (p:0.001; p<0.01). The mean value of histopathologic stage of vitamin-C + ß-hCG groups were significantly higher than control, sham and vitaminC groups (p1:0.003, p2:0.018,

p3:0.005; p<0.01, and p<0.05, respectively). Mean value of histopathological stage of the vitamin-C group was significantly lower than the mean values of the sham and ß-hCG groups (P1:0.021, p2:0.007, p<0.05, and p<0.01, respectively). The incidence of testicular atrophy (100%) in vitamin-C + ß-hCG group was significantly higher than sham (40%) and ß-hCG (40%) groups (p:0.006; p<0.01). The incidence rates of necrosis and inflammation in the vitamin-C + ß-hCG (60%) and the ß-hCG groups (40%) were statistically significantly higher than the control group (0%) (p:0.040, p<0.05).

Discussion: Acute scrotum accounts for 1.1% of pediatric emergency applications, and 13-54% of them are testicular torsion. It was observed that histopathologic findings were improved and the histopathological stage was significantly decreased with receiving vitamin-C. On the other hand, histological findings of β-hCG and β-hCG + vitamin-C groups demonstrated a worse prognosis. Also, intense inflammation and necrosis were seen.

Conclusion: It has been shown that, when testicles are exposed to ischemia/reperfusion injury with β-hCG, oxidative damage in testicles worsens, andseverity of this damage exceeds the capacity of potent antioxidants such as vitamin-C. According to data, β-hCG may be harmful to testicles. Vitamin-C alone is used to prevent reperfusion injury significantly.

Keywords: Testicular torsion, Ischemia-reperfusion injury, β-hCG, vitamin-C.

Figure 1. Health testicle

[Abstract:0491] OP-006 [Urinary System Stone Disease-Treatment (SWL, Ureteroscopic, Percutaneous Interventions, Medical Approach)]

The use of Fresh Frozen Cadavers for training in percutaneous renal puncture: A study from Cadaveric Research on Endourology Training (CRET) group

Murat Bağcıoğlu[1], Emre Huri[2], İlkan Tatar[3], Andreas Skolarikos[4], Cesare Scoffone[5], Cecilia Cracco[5], Mehmet Gülüm[2], Roberto Miano[6], Kemal Sarıca[1]

[1]Department of Urology, Kafkas University School of Medicine, Kars, Turkey
[2]Department of Urology, Hacettepe University School of Medicine, Ankara, Turkey
[3]Department of Anatomy, Hacettepe University School of Medicine, Ankara, Turkey
[4]Department of Urology, National and Kapodistrian University, Athens, Greece
[5]Department of Urology, Cottolengo Hospital, Torino, Italy
[6]Department of Urology, Tor Vertaga University, Rome, Italy

Objective: To present the CRET - designed cadaveric PNL training program, to share group's current experience and to evaluate the appropriateness and effectiveness of the fresh-frozen cadaver as a model in training percutaneous renal access.

Material and methods: Between May 2013 and December 2015 five cadaveric PNL training courses were organized. Trainees with minimum experience in PNL run through the structured courses being taught by experienced anatomists and urologists. Following the theoretical session each trainee had 5-hour hands-on training on an embalmed and a fresh-frozen cadaver. After the course, an online 13-item survey was sent to all participants to assess the training program. The survey was composed of demographic questions, and also questions designed to evaluate the previous experience, and the degree of satisfaction of the trainees.

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

Results: Twenty-two certified urologists were enrolled to the study. Their mean experience in urology practice was 6.40±5.70 years. Fourteen of all had never experienced a PNL operation and had a mean self-confidence score of 1.57-point out of 10 points before the course. Mean time to a successful percutaneous renal access during course was 4.34±2.09 mins for the trainees. While maximum self-confidence score to gain a successful percutaneous renal access was 7 points before the course among all trainees, minimum score of it was 6 points after course except one trainee. The effect of the course in terms of basic anatomical knowledge and self-confidence about percutaneous renal access among trainees significantly increased after course.

Conclusion: Fresh frozen cadavers are not used anew, but their use in the field of PNL access training is an innovative and most realistic simulation model.

Keywords: Access; cadaver; percutaneous; training.

[Abstract: 0514] OP-030 [Experimental Urology - Oncology]

Evaluation of antitumoral effects of Tarantula Cubensis extract (Theranekron®) on prostate cancer cell lines

Erhan Ateş[1], Arif Kol[1], Çiğdem Yenisey[2]

[1]*Department of Urology, Aydın Adnan Menderes University School of Medicine, Aydın, Turkey*
[2]*Department of Medical Biochemistry, Aydın Adnan Menderes University School of Medicine, Aydın, Turkey*

Alcoholic extract of *Tarantula Cubensis* (Theranekron®) is a homeopathic medicine obtained from the same named spider and used in veterinary medicine. It is especially used in the treatment of inflammatory diseases of the skin, connective tissue and nervous system. It has been reported that the drug may cause demarcation in necrotic tissues and epithelialization in the wound area. It is also very effective for ameliorating painful abscesses, inflammatory ulcers, and severe dermatitis. Also, alcoholic extract of *Tarantula Cubensis* (TCE) has been found to stop the growth of canine mammary adenocarcinoma (CMA) by promoting demarcation from surrounding tissues. One study showed that TCE therapy in CMA led to a significant decrease in the expression of Ki-67 which is a proliferation marker in the tumor cell and antiapoptotic Bcl-2. These results suggest that TCE may be effective for controlling the local growth of canine mammary adenocarcinoma by regulating apoptosis. In this study, we aimed to investigate the antitumor effects of TCE therapy in human prostate adenocarcinoma. Two different prostate cancer cell lines ie. PC3 and LNCAP were used in the study. First, concentrations of 25,50,75 and 100% of TCE were applied to all cell lines for 24 hours. But, since no live cells were observed in the medium, TCE was reapplied at concentrations of 1, 5, 10 and 20% for 48 hours. Changes in cell viability rates were determined by the MTT (3-(4, 5-dimethylthiazolyl-2)-2, 5-diphenyltetrazolium bromide) assay. The 50% inhibitory concentration (LogIC50) was calculated according to MTT assay results. Cell viability rates were determined as 53, 20, 12, 11% for PC3 cells at 1, 5, 10 and 20% concentrations after 24 hours, respectively. At the end of 48 hours, the concentrations were measured as 37, 10, 9% for respective concentrations of 1, 5 and 10%, and absorbance values obtained at 20% concentration showed no cells remaining. For LNCaP cells, cell viability rates were determined as 55, 25, 10, 7% for concentrations of 1, 5, 10 and 20% after 24 hours,

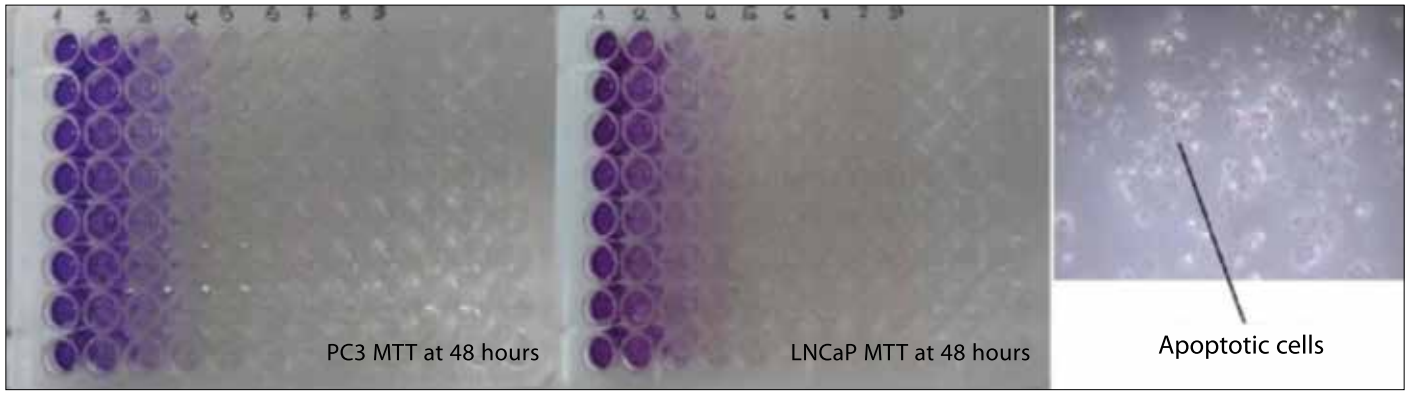


Figure 1. PC-3 and LNCaP cell line at 48.hours, measurement of cell viability by MTT method and appearance of apoptotic cells

respectively. At the end of 48 hours, it was measured as 41, 17, 6% for the concentrations of 1, 5 and 10%, and absorbance values obtained at 20% concentration showed no cells remaining again. The IC_{50} values at 24 and 48 hours of TCE for PC3 cells were calculated as 4,334 and 2,941, respectively, and as 4,43 and 4,368 for the LNCaP cell, respectively. Starting from the 1% concentration, TCE induced apoptosis in both cell lines depending on the dose and time, leading to the cell death.

Keywords: Adenocarcinoma; apoptosis; prostate; tarantula cubensis.

[Abstract: 0556] OP-048 [Urotechnology]

Sacral neuromodulation using three dimensional sacral bone model: A novel technique

Mehmet Gökhan Çulha[1], Rahmi Onur[2], Alper Ötünçtemur[1], Fatih Altunrende[1]

[1]*Department of Urology, University of Health Sciences, Okmeydanı Training and Research Hospital, İstanbul, Turkey*
[2]*Department of Urology, Marmara University School of Medicine, İstanbul, Turkey*

Introduction: The purpose of this study is to develop a model that will contribute to the learning curve of sacral neuromodulation(SNM) learning and to make the process more effective and easy to implement and the details of this method and the creation of a three dimensional(3D) sacral bone model are presented.

Case presentation: A 49-year-old woman with complaints of increased urinary frequency and pelvic pain for seven years applied to the urology polyclinic. Previously, there was no improvement in the health state of the patient with interstitial cystitis diagnosis who had undergone treatment with 3 different anticholinergic agents for 1 year, oral pentosan polysulfate, intradetrusor botulinum toxin injection for 3 years, and intravesical hyaluronic acid treatment for 1 year. With the bladder diary, it was determined that the maximum capacity was 100cc, frequency of urination was 23-24 times a day and the average interval between the micturitions was 20 minutes. For this procedure, first,thin-section computed tomography was obtained from the sacral region of the patient, and 489 axial DICOM files with 1.5 mm cross-sectional thickness were obtained.This data set was converted into axial, sagittal and coronal sections using the open source InVesalius (Ver. 3.0) program. The appropriate threshold value was determined on the axial, sagittal and coronal sections to determine the desired region of the patient, and the corresponding 3-dimensional model was created. After the model was created and the artefacts were cleaned, the model which will be printed from the 3D printer was formed (Figure 1a). Then, with the help of the 3D model program,the whole process of the patient was explained in detail. It was decided to apply sacral neuromodulation to the patient after interview with the patient, visual demonstration of the procedure and informed consent was obtained. Under general anesthesia, after induction, the sacral foramines were localized in the prone position by X-ray imaging. The distance between the skin and the foramen and the entrance angle were calculated (skin-foramen distance: 7.12 cm, entrance angle: 68 degrees) so the needle was inserted precisely at a correct angle, also confirmed with simultaneous fluoroscopy (Figure 1b-d) (Medtronic® 3550-18 Introducer kit, Minneapolis, MN, USA). Test stimulation was performed and the patient›s sensory response was monitored. After the ideal stimulation response was determined, the guidewire was placed through the test needle. Then it was implanted with the help of a Medtronic 3889-41 (Minneapolis, MN, USA). Tined lead scopy. During this process, the scoping time was calculated as 18 seconds. One month after the procedure, it was observed that the number of micturitions decreased to 12 a day and the duration between the micturitions was about 120 minutes. Then Medtronic 3058 Interstim II (Neurostimulator) patient then was implemented) permanent device was implanted under local anesthesia.

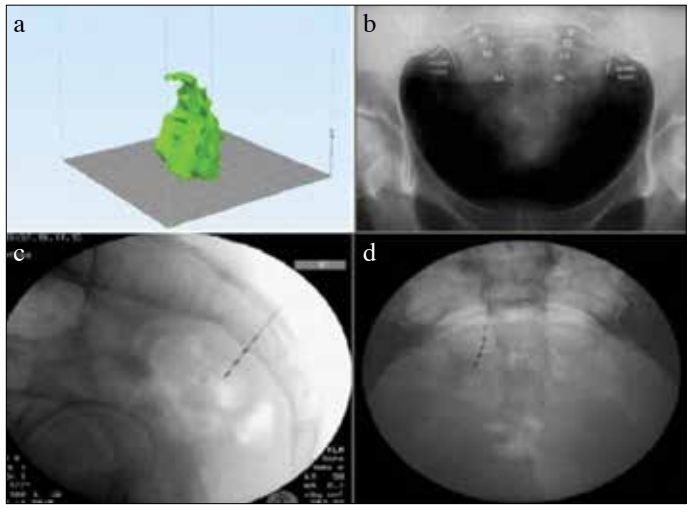


Figure 1. a-d. 3D sacral bone model obtained by the patient's CT images (a). X-ray determination of sacral foramen (b). The electrode placement to S3 foramen (c). Insertion of electrode into S3 foramen (d)

Conclusion: Success of SNM treatment depends on S3 foramen continuous electrical stimulation, appropriate patient selection and correct

Turk J Urol 2018; 44(Supp. 1): S1-S26
DOI: 10.5152/tud.2018.121218

entry into S3 foramen and placement of the electrode in the appropriate position.As a new technique, the SNM operation with the aid of the 3D sacral bone model has helped to achieve better results for both the patient and the practitioner. There is a need for larger series of studies for the further development of this model.

Keywords: 3D printer; interstitial cystitis; overactive bladder; sacral neuromodulation; sacral model.