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1

Peripheral Distribution and Branching Patterns of the Dorsal Nerve of the Penis

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Introduction: The aim of this study was to show the branching pattern and the anatomical variations of the dorsal nerve of the penis (DNP), particularly the interaction with the tunica albuginea.

Materials and Methods: The penises of 22 male adult cadavers were dissected. The deep dorsal vein, dorsal penile artery, and DNP were isolated and examined using a Carl Zeiss stereoscopic dissection microscope. The number and location of the branches and their circumferences right under the symphysis pubis, along the penile shaft, and before entering the glans of the penis were noted. The presence of branches perforating the tunica albuginea were noted and photographed.

Results: The DNP was composed of 2, 3, 4, 5 and 6 main branches beneath the symphysis pubis in 6, 6, 6, 1, and 3 of the dissections, respectively. At the level of the corona glandis, 2, 3, 4, and 5 main branches could be isolated in 4, 8, 7, and 3 dissections, respectively. The mean circumference of the branches beneath the symphysis pubis and at the level of the corona glandis was 2.39 mm (1.65-3.55) and 1.44 mm (0.83-2.13), respectively. In 16 of 22 dissections (72.7%), the perforating branches of the DNP into the tunica albuginea were identified (1 in the proximal, 7 in the mid, 4 in the distal, 2 in both the proximal and mid, and 2 in the mid and distal sections).

Conclusion: A detailed knowledge of the anatomy of the DNP, especially the branching pattern and the branches perforating the tunica albuginea, is required for penile surgery.

Key Words: dorsal nerve of the penis, penile anatomy, penile surgery

2

Chondroid Syringoma of the Scrotum with Mixed Inflammatory Infiltration

Ayşe Nur Değer, Bekir Aras, Figen Taşer – TURKEY

Introduction: Chondroid syringoma is a rare benign tumor originating from epithelial cells and mucoid stroma with mesenchymal cells. The tumor is generally seen in the head and neck. We present a very rare chondroid syringoma in the scrotum, in which mixed inflammatory infiltration within the stroma of the tumor was detected.

Materials and Methods: A 59-year-old man complained of a non-tender mass in the scrotum. Physical examination revealed a subcutaneous, mobile, cystic mass in the left posterolateral scrotal area. The left spermatic cord and testis were palpable. Excisional biopsy was carried out. The tumor was well circumscribed, cystic, septate, white-yellow in color, and 2.5 X 2.5 X 2 cm in size. Spindle-shaped cells with eosinophilic cytoplasm and small, round nuclei mostly with cystic dilatation and branching were seen in a microscopic examination. Ductal structures were found in some portions. Around the tumor cells, mixed inflammatory infiltration with no cytological atypia within mucoid stroma were seen. There was no inflammation in the surface epithelium and stroma around the tumor. Immunohistochemically, the tumor cells were positive for pancytokeratin, Vimentin, and S100 protein.

Results: The pathological diagnosis was given as chondroid syringoma based on histomorphological and immunohistochemical findings.

Conclusions: Chondroid syringoma of the scrotum is very rare. To our knowledge only eight cases have been reported and we did not find any reports in the literature of histomorphological interpretation of inflammatory infiltration within the stroma of this type of tumor.

Key Words: chondroid syringoma, scrotum, inflammatory infiltration

3

A Rare Neoplasm in a Male Patient: Bladder Leiomyoma
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Introduction: Leiomyomas are mostly encountered in the uterus. Bladder leiomyomas account for 0.43% of total bladder neoplasms and are most commonly found in women. We present a case of bladder leiomyoma in a 36-year-old male.

Materials and Methods: A 36-year-old male patient presented to our urology clinic with left flank pain that began almost a week earlier. A 20 X 19 X 18 mm mass was detected in the left posterolateral bladder wall via MRI and USG. Cystoscopy and transurethral resection of the bladder tumor was performed. The mass was partially excised. Histopathological examination revealed fragmented portions of a tumor composed of whorls and interlacing fascicles of spindle-shaped cells. The tumor cells were positive for smooth muscle actin and desmin by immunohistochemical methods. The tumor cells were not immunoreactive for CD117. Cytological atypia, mitotic activity, and necrosis were not detected.

Results: The pathological diagnosis was leiomyoma.

Conclusions: We presented a case of a bladder leiomyoma in a male patient and discussed clinical and etiopathological features of bladder leiomyomas.

Key Words: bladder, leiomyoma, mesenchymal neoplasia

4

Ramification of the Renal Artery at the Sinus Level: An Anatomical Study
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Introduction: Knowledge of certain ramification patterns of the renal artery at the sinus level as well as its variability are extremely important especially when renal transplants or segmentary resections are involved. On the basis of an anatomical study carried out using dissection specimens, a model of the specific trajectories can be established.

Materials and Methods: The study took place in the Department of Anatomy, using 10 kidneys harvested from formalin-fixed cadavers. First, the posterior parietal peritoneum was removed, followed by the dissection of the retroperitoneum. The kidney was extracted together with the constitutive elements of the pedicle.

Results: In 8 of the 10 cadavers we identified a single renal artery, and in 2 cadavers we identified a double renal artery. The single renal artery bifurcates anterior to the renal pelvis and then divides into five segmentary branches: 4 prepielic and 1 retropielic, which then surround the renal pelvis at its superior side. In the cases with double renal arteries, in one case, we identified 6 segmentary branches, including 2 posterior branches.

Conclusions: In 20% of the 10 cases, we located double renal arteries, a situation in which certain connections between pedicle elements are modified. When this occurs, more segmentary arteries may exist. The retropielic branch passes superior to the renal pelvis. The renal artery most often bifurcates before entering the renal hilum.

Key Words: renal artery, segmentation, variation

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Vesico-vaginal Fistula: Late Complication of Cephalopelvic Disproportion in Primiparous Women
Octavian Munteanu, Florin Filipoiu, Bogdan Badescu, Ioan Bulescu, Bogdan Cristea, Eulen Tarta, Laura Stroica, Monica Cirstoiu – ROMANIA

Introduction: This study was undertaken to evaluate the correlation between cephalopelvic disproportion complicated with prolonged labor and vesicovaginal fistula.

Materials and Methods: We conducted a retrospective analysis to determine the incidence of vesicovaginal fistula in a group of 161 primiparous patients who delivered after prolonged labor (> 24 hours, documented in a partograph) either vaginally or by Cesarean section due to cephalopelvic disproportion (diagnosed by combined clinical and ultrasound examinations).

Results: The patients ranged from 15 to 39 years old (average age, 27 years). The patients were divided into two groups: Group A, 63 patients who delivered vaginally after prolonged labor, and Group B, 98 patients who underwent Cesarean section. The incidence of vesicovaginal fistula was of 1.24%: 2 patients, one patient from each group. Although prolonged labor was a criterion for study eligibility, 54 patients (33 in Group A and 21 in Group B) stated that systematized uterine contractions began more than 8 hours prior to admission to the hospital.

Conclusions: Our results were consistent with those of other multicentric studies. We conclude that vesicovaginal fistula is a rare complication of prolonged labor, related to cephalopelvic disproportion.

Key Words: vesico-vaginal fistula, cephalopelvic disproportion, primiparous

6

Primary Obstructive Giant Megaureter with Blind-Ending Adynamic Segment: A Case Report
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Introduction: Primary obstructed giant megaureter (POGM) is an extremely rare subgroup of megaureter. POGM is a result of obstruction or an adynamic ureteral segment in the ureterovesical junction. Although conservative management is indicated in most cases of primary obstructed megaureter, surgery is still indicated when primary obstructed megaureter is associated with increasing dilation with symptoms or progressive renal damage.

Materials and Methods: We report a unique case of primary obstructive giant megaureter with blind-ending adynamic segment of the right kidney with hydronephrosis.

Results: A 6-month-old female infant who had vomiting, diarrhea, fever, and indolence during the previous two weeks was referred to our clinic. Renal ultrasonography showed a tortuous megaureter (diameter = 38 mm) that tapered into and ended in the lower portion of the right side of the pelvis and arose from the upper portion of the right kidney. An obstructive pattern was detected by diuretic renography. A voiding cystourethrogram showed a normal bladder and urethra. Cystoscopy revealed a normal urethra, and a hypoplastic right hemitrigone with an absent right ureteral orifice and a normally placed left ureteral orifice. Intravenous urography (IVU) revealed hydroureteronephrosis (Grade 3), dilated and tortuous at the right ureter and terminating blindly at its distal end. Surgery revealed that the right ureter wall had become quite thickened, and the right ureter had dilated. To treat the patient, the adynamic ureteral segment (5 cm) was excised and ureteroneocystostomy was performed with intravesical and extravesical ureteral tailoring and ureteroneocystostomy.

Conclusions: POGM is reported rarely in the literature. Excising the adynamic ureteral segment and performing a ureteroneocystostomy may be the treatment of choice for POGM.

Key Words: megaureter, ureteral obstruction

7

Acute Urinary Retention Due to Urethral Injury after Prolonged Vaginal Delivery: A Case Report

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Introduction: Postpartum urinary retention (PUR) can result from functional and anatomical risk factors. Functional risk factors include physiologic progesterone-related changes during pregnancy or adverse reactions to epidural anesthesia. Anatomical causes include pudendal or pelvic nerve injury, which leads to detrusor hypotonia or bladder-outlet obstruction.

Materials and Methods: We report the case of a 35-year-old patient, gravida I, para I, who delivered vaginally after a prolonged labor (9 hours) a male fetus, with a weight of 3800 g and a calculated Apgar score 8.

Results: Prophylactic episiotomy was performed. No apparent structural lesions of the urethra were noted during the routine postpartum examination. However, anterior vaginal edema and extended posterior perineal laceration were observed. The patient followed a regular obstetrical protocol. After 6 hours postpartum, the patient complained of being unable to void her bladder and was diagnosed with PUR. A Foley-type urinary catheter was inserted and approximately 850 mL of normochrome urine was evacuated. The patient presented no functional risk factors for PUR such as epidural analgesia.

Conclusions: This case illustrates a combination of functional and anatomical mechanisms, which determined PUR. Even though no clear lesions to the urethra were observed, we consider that local edema due to prolonged labor and the pain caused by extended posterior perineal laceration determined hyper-reactivity of the external urethral sphincter complicated with acute urinary retention (AUR).

Key Words: postpartum urinary retention, prolonged labor

8

Retrocaval Ureter: A Case Report

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Introduction: The retrocaval ureter (or circumcave or postcave) is a rare congenital anomaly of the inferior vena cava and the ureter. Anatomically, the ureter remains outside and in front of the inferior vena cava. Here it goes back inside and in front of the inferior vena cava. This thus provides a urethral obstruction by vascular compression. The first case was described in 1893 and since then about 200 cases have been detailed in several books and publications.

Materials and Methods: We report the management of a case of accidental discovery of retrocaval ureter in a young white, 26-year-old male who presented with right flank pain, which irradiated to the groin and the external genitalia, and who had an otherwise unremarkable physical examination.

Results: A uro-scanner confirmed the diagnosis. The patient underwent surgery consisting of segmental resection and termino-terminal anastomosis using a JJ stent which was left for one month without any complications.

Conclusions: Retrocaval ureter is a congenital anomaly that presents clinically late in the third and fourth decades of life. Very few clinically symptomatic cases have been reported worldwide, and these cases were first reported in Mauritania. Treatment consists of surgery which allows for correction of the anomaly with resolution of symptoms. There is a need to research the autopsy incidence of retrocaval ureter among Mauritanians.

Keys Words: retrocaval ureter, diagnosis, surgical treatment

9

Vaginal Reconstruction after Failure of a Mini-sling Procedure because of Anterior Vaginal Wall Prolapse

Tarık Yonguç, Bumin Örs, Serkan Yarımoğlu – TURKEY

Introduction: We report a case of a 74-year-old female who underwent vaginal reconstruction after failure of a mini-sling because of a cystocele.

Materials and Methods: A 74-year-old woman felt a bulging in the vaginal area and had stress urinary incontinence (SUI) symptoms.

Results: The patient had undergone a mini-sling procedure because of SUI a year ago. One month before her first surgery she felt a bulging in the vaginal area. After surgery her SUI symptoms and vaginal bulging did not disappear, and one year later she underwent a clinical evaluation in our department, including a complete history and physical examination, cough stress test (CST), urodynamics, and cystoscopy. Her symptom score was 21, assessed with the International Consultation on Incontinence Questionnaire Short Form (ICIQ-SF). She had a severe SUI with a daily six-pad use. She also had POP-Q stage 2 anatomical anterior vaginal wall prolapses. Urodynamic testing revealed pure SUI with residual urine less than 50 cc. We decided to perform a TOT sling with an anterior colporrhaphy. There was no intraoperative complication. Three months after surgery she had an ICIQ-SF score of 0. There was no anatomical recurrent prolapse on physical examination (POP-Q stage 0).

Conclusions: Mini-sling operations for treatment of SUI are becoming very popular. Although this procedure seems easier to perform, its indications and expected long- term results should be well defined.

Key Words: mini-sling, reconstruction, cystocele, stress urinary incontinence

10

Conservative Treatment of Spontaneously Thrombosed Right Extra-testicular Varicocele

Tarık Yonguç, Ali Tosun, İbrahim Erdinç, Halil İbrahim Bozkurt – TURKEY

Introduction: We report a rare case of right varicocele thrombosis in a patient who presented with painful inguinal swelling.

Materials and Methods: A 32-year-old male was referred to our urology clinic complaining of left-groin pain and swelling.

Results: The condition had started three days earlier. The patient had no history of surgery, chronic illness, allergy, or trauma. There was no testicular pain or tenderness. Physical examination was significant only for a right inguinal firm, tender swelling of about 5 x 4 cm, and with no impulse on cough. There was no pathology in magnetic resonance imaging of the abdomen. A color Doppler ultrasonographic (USG) examination confirmed the diagnosis of a right thrombosed varicocele with a diameter of 4 mm. After consultation with a cardiovascular surgeon, conservative management was initiated in the patient, with 0.7mL/day of 20,000 IU subcutaneous tinzaparin sodium (low-molecular weight heparin). After one week of treatment the patient's inguinal swelling decreased. A color Doppler examination showed that the thrombosis persisted and blood flow was absent in the right varicocele. The dose was increased to 0.9 mL/day of 20,000 IU tinzaparin sodium. After one week, the patient had no complaints. There was no abnormality in his physical examination. Color Doppler re-examination showed that the thrombosis had disappeared, so there was no need for surgical management.

Conclusions: Unilateral right varicoceles are very rare and should alert the clinician to a possible underlying pathology causing inferior vena cava (IVC), since the right gonadal vein directly empties into the IVC. If properly diagnosed, the condition can be treated conservatively, avoiding an unnecessary operation.

Key Words: right varicocele, thrombosis, conservative treatment, color Doppler ultrasonographic

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Penile Fracture with Bilateral Corporeal Rupture without Urethral Involvement
Tarık Yonguç, Halil İbrahim Bozkurt, Bumin Örs, Zafer Kozacıoğlu, Gökşin Nilüfer Yonguç – TURKEY

Introduction: We report a rare case of a penile fracture with bilateral corporeal rupture without urethral involvement. As far as we know this is the second case reported in the literature.

Materials and Methods: We report the case of a 34-year-old male who presented after 12 hours following blunt injury of the penis by self-inflicted injury.

Results: The patient reported that he had been doing "taghaandan", that is, cracking the penis, for about 15 years, but this time he felt a "tearing/popping" sensation and reported rapid detumescence and severe penile pain, but he was able to void well. Physical examination revealed a swollen, ecchymotic and deviated, circumcised penis without blood at the meatus. Appropriate concern for penile fracture led to operative management. At the time of the operation, after urethral catheterization, a subcoronal circumcising incision was made and the penis was degloved. After evacuation of a large hematoma, a significant defect was identified in the ventral side of the left corpus cavernosum. With further dissection it was detected that the defect extended along both corpus cavernosum, posterior to the urethra. The urethra was elevated after sharp and blunt dissections and was found to be intact. The defects were repaired with 3-0 PDS in a simple running fashion. The urethral catheter was removed on postoperative day 1. The patient was discharged without any complications. He had satisfactory painless erections without penile curvature with an International Index of Erectile Function (IIEF) score of 23 at the third-month of follow-up.

Conclusions: Penile fracture with concomitant urethral injury is rare, with reported frequencies of 9% to 20%. Especially in cases of bilateral cavernosal rupture, even if retrograde urethrography is negative, urethral injury should be suspected.

Key Words: penile fracture, bilateral corporeal, without urethral involvement, surgical treatment

12

Medium-Term Follow-up of Transobturator Approach for Cystocele Repair with Mesh in a Sexually Inactive Elderly Group
Tarık Yonguç – TURKEY

Introduction: We evaluated the clinical outcomes at 3 years or more following transobturator mesh repair to treat cystocele.

Materials and Methods: Women with a symptomatic prolapse, POP-Q stage 2 or more at the anterior or both compartments, who were seen between 2005 and 2008, were eligible for the study. We retrospectively evaluated 33 sexually inactive, elderly women who underwent cystocele repair with a mesh via a transobturator approach. The patients had a mean age of 72.3 years. We repaired the posterior compartments without mesh. The patients were followed for at least 36 months, and some were followed for 60 months. All patients underwent a clinical evaluation, including a complete history and physical examination, a voiding diary, a cough stress test (CST), urodynamic testing, and cystoscopy. Twenty-five women had urodynamically proven SUI and 8 women had normal results. The prolapse was staged using the POP-Q classification system. Success was defined as POP-Q stage 0-I or greater without any symptoms of prolapse.

Results: Of the 33 women, 29 women underwent anterior repair and 4 women had both anterior and posterior repair. All women underwent a concomitant transobturator tape (TOT) procedure, which was prophylactic in 8 women. Symptomatic anatomical recurrent POP was stage 2 in two women (6.06%) who felt discomfort and dull pain in the vaginal area after 3 years. Asymptomatic anatomical recurrent POP was stage 2 in 6 women (18.18%). No patient required re-intervention for prolapse. There was no vaginal mesh erosion, no postoperative urinary retention, and all women were continent.

Conclusions: Medium-term results demonstrated that the transobturator technique with a concomitant TOT is a durable prolapse repair.

Key Words: pelvic organ prolapse (POP), mesh repair, medium-term, sexually inactive

13

Endometriosis in the Surgical Scar Tissue after Caesarean Section in Fertile Women: Two Cases
Ayşe Nur Değer, Faik Yaylak, Zülfü Baylan – TURKEY

Introduction: The presence of endometrial tissue outside the uterus is defined as endometriosis, which is common in fertile women. Pelvic operations such as an abdominal hysterectomy or a Caesarean section may result in endometriosis in the scar tissue. This condition is commonly an under-appreciated or misdiagnosed phenomenon in general surgery.

Materials and Methods: We present two cases of endometriosis in surgical scar tissue after a Caesarean section.

Results: Case 1 was a 28-year-old woman with a painful swelling on the surgical scar 5 years after a Caesarean section. A subcutaneous, solid, 11 mm hypoechoic lesion was clinically documented with ultrasonography. Case 2 was a 32-year-old female with a painful mass (5 x 4 x 3 cm) on the surgical scar 4 years after a Caesarean section. The women did not have any systemic and/or gynecological symptoms. Their lesions were excised and their postoperative courses were uneventful. Histopathological examination confirmed the diagnosis of endometriosis with documentation of endometrial gland proliferation with the presence of endometrial stroma.

Conclusions: The presence of incidental endometriosis should be suspected in fertile women who have scar tissue after Caesarean section. A clinical diagnosis merits a histopathological examination. Treatment is possible with complete excision of the endometria with clear margins.

Key Words: endometriosis, surgical scar

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Radical Prostatectomy on a Well-Fixed Cadaver
Emre Huri, Serkan Özcan, İlkan Tatar, Okan Bilge – TURKEY

Introduction: As laparoscopy is becoming more common in urology, increased emphasis is being placed on education about this procedure. Knowledge of anatomy is essential to perform safe, effective laparoscopy. The goal of task training and simulation experience is to diminish human error and improving patient outcomes. Cadaveric dissection is used as a major tool for anatomy education, and latex injection is a new technique for vascular visualization. We developed a video to show the steps of performing a radical prostatectomy (RP) operation on well-fixed cadaver (WFC).

Materials and Methods: RP was performed on a WFC injected with colored latex and the RP steps were recorded with an endovision system while the vascular structures were observed. The steps were: pelvic lymphadenectomy; opening of the endopelvic fascia; limiting the incision of the puboprostatic ligaments; suture ligation and transection of the dorsal venous complex; dissection of the urethra and transection of the urethra; dissection of the prostate from the neurovascular bundles; securing and transection of the prostatic pedicles; transection and reconstruction of the bladder neck; dissection of the seminal vesicles and ampullary portions of the vasa deferentia; and performance of the vesicourethral anastomosis.

Results: Using colored latex injection of vascular structures to make them more visible and similar to their appearance in viable tissue has advantages in terms of surgical anatomy training. Individual steps of RP were replicated. A bloodless surgical field increased the convenience of this technical application.

Conclusions: This cadaveric surgical procedure with latex injection and a bloodless surgical field was effective in improving knowledge of laparoscopic surgical anatomy and success in performing this surgery.

Key Words: cadaver, latex injection, radical prostatectomy

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Impact of Cadaveric Surgical Anatomy Training on Urology Residents' Knowledge

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Introduction: Knowledge of anatomy is essential for safe, effective medical practice. Cadaveric dissection is used as a major tool for anatomy education in medical schools. In this study we aimed to determine how a uro-anatomy cadaveric dissection course would impact the knowledge of urology residents.

Materials and Methods: A three-day course was given to 50 urology residents by experienced trainers. The efficacy of the course was assessed using a multiple-choice questionnaire given before and after the course. The questions were randomly selected from a bank of multiple-choice questions prepared by the trainers. The same 20 questions were asked to the residents before and after the course.

Results: Completed questionnaires before and after the course were available for 25 residents (50%). Residents correctly answered 293 of 500 questions (59%) before the course and 324 of 500 questions (65%) after the course ($p < 0.05$). In individual analysis, 16 residents (64%) increased their scores, 4 residents (16%) maintained the same scores, and 5 residents (20%) had lower scores. The number of correct answers for 6 questions was lower after the course.

Conclusions: This cadaveric surgical anatomy course was effective in improving surgical anatomy knowledge for most, but not all, urology residents. We also identified ways to improve the course in the future.

Key Words: cadaver, urology, anatomy, education, registrars

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Deformity of the Spine Anatomy (Scoliosis): a Difficult Case for Urologists

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Introduction: Everyone's spine has a natural curve. Scoliosis, which is defined as a deformity of the spine anatomy that is characterized by the abnormal curve of the spine in the coronal plane, affects about 2% of the population. Little is known about the potential impact of scoliosis on the kidneys.

Materials and Methods: We report a case of a patient with a spine anatomy deformity that complicated urology treatment.

Results: A 37-year-old female patient was admitted to the hospital with bilateral flank pain. The patient's history revealed that she had been admitted to the hospital because of right flank pain eight years ago and IVP (intravenous pyelography) imaging had shown a stone in her right kidney. The patient could not be treated with extracorporeal shock wave lithotripsy, since it was impossible to place her in an adequate position because of her severe thoracolumbar scoliosis. Percutaneous nephrolithotomy and retrograde intrarenal surgery is difficult to perform in such patients. Physical examination revealed severe bilateral flank pain and hypertension. Non-contrast abdominal computed tomography (CT) images of the abdomen showed thoracolumbar scoliosis that included the 11th and 12th thoracic vertebrae and all lumbar vertebrae. The right side was the concave side of the curvature; the left side was the convex side. CT images also showed a right kidney with a staghorn stone and a left kidney which was pressed between the ribs and the convex side of scoliotic vertebrae.

Conclusions: Spine anatomy deformity that is part of scoliosis may cause difficulty in the treatment of renal disease.

Key Words: spine anatomy, scoliosis, renal disease, treatment

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Cadaveric Approach to the Muscles and Fasciae of the Male Perineum

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Introduction: This study aimed to demonstrate the male perineal region anatomy layer by layer in a cadaveric specimen. During this procedure, the fascial anatomy and its relationship with the muscles was described layer by layer in detail, which has a great importance for surgery of this part of the body.

Materials and Methods: The dissections were done in a formalin-fixed male cadaver in the lithotomy position. The skin and superficial layer of the superficial fascia was dissected and removed carefully by incisions made from the ischial tuberosity to the coccyx and pubic symphysis.

Results: First, the superficial layer of the superficial fascia (Cruveilhier's fascia) and the deep layer of the superficial fascia (Colles' fascia) were recognized just beneath the skin. Then, the deep perineal fascia (investing fascia or Gallaudet fascia) was distinguished, which was covering the muscles of the superficial pouch (bulbospongiosus, ischiocavernosus, and superficial transverse perineal muscles). Deep to these muscles, the inferior layer of the urogenital diaphragm (perineal membrane) was identified and dissection was continued through this membrane in order to explore the deep perineal pouch. Last, the dissection was continued up to the superior fascia of the urogenital diaphragm. Additionally, the anterior recesses of the ischioanal fossa and its relationship with the fasciae and muscles were identified.

Conclusions: The relationship between the fasciae and muscles of the perineum has a great importance for surgeons and this cadaveric approach showed these important relationships layer by layer in detail.

Key Words: perineum, fascial anatomy, perineal muscles, gross anatomy, dissection

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Perineal Approach to the Prostate: A Cadaveric Study

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Introduction: This study aimed to demonstrate the perineal approach to the prostate in a cadaveric specimen and to provide a detailed description of the fasciae and muscles in the perineal region.

Materials and Methods: A formalin-fixed male cadaver was brought into the lithotomy position. The dissection was done layer by layer. The skin was reflected and removed carefully by incisions made from the ischial tuberosity to the coccyx and pubic symphysis. Lastly, the fasciae and muscles were dissected layer by layer and the perineal approach was demonstrated.

Results: First, the superficial layer of the superficial fascia (Cruveilhier's fascia) and the deep layer of the superficial fascia (Colles' fascia) were recognized just beneath the skin. Then, the deep perineal fascia (Gallaudet fascia) was distinguished, which was covering the muscles of the superficial pouch. Deep to these muscles, the perineal membrane was identified, and dissection was continued through this membrane to explore the deep perineal pouch reaching to the superior layer of the urogenital diaphragm. The prostate and prostatic parts of the urethra were recognized. A probe was inserted into the urethra externally to identify it inside the urinary bladder.

Conclusions: It is always crucial to choose the best approach from available options for prostatic surgery. A basic understanding of the relationships and interactions between the different layers of the fasciae and the muscles of the perineum is also important. Although our specimen was a very stiff male cadaver fixed in formalin long ago, we showed all the fasciae and the muscles layer by layer in our study.

Key Words: perineum, prostate, cadaveric approach, gross anatomy, dissection

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Duplication of the Deep Dorsal Vein of Penis
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Introduction: This report aimed to highlight the surgical importance of duplication of the deep dorsal vein of the penis, which was incidentally encountered during routine anatomic dissection.

Materials and Methods: Dissections were done in layers on two penises from formalin-fixed cadavers to show the innervations and vasculature patterns with blue colored latex that had been injected previously through the common iliac vein. The length, width, and relationships of the duplicated deep dorsal veins were evaluated photogrammetrically.

Results: The duplicated deep dorsal veins were nearly equal in size and lay on the dorsal groove of the penis inferomedially to the dorsal artery and nerve in both cases. The suspensory ligaments of the penises were elongated and formed a median septum between the veins. Duplicated veins converged before passing deep to the arcuate ligament of the pubis and joining the prostatic venous plexus.

Conclusions: Duplication of the deep dorsal vein of the penis is a rare condition. This variation gains importance especially in applications of penile prosthesis and in penile transplantation surgeries. This variation also has to be kept in mind in blunt or penetrating traumas and venous thrombosis of the penis.

Key Words: duplication, deep dorsal vein of penis, vasculature of penis, anatomy, variation

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Hydatid Cyst of the Kidney: An Analysis of 8 Cases
Adalat Hasanov, Jamal Musayev, Ilaha Karimova, Khumar Ahmadova, Mahira Nazirova – AZERBAIJAN

Introduction: Hydatid cyst or echinococcosis is a parasitic disease that is usually seen in the lung and liver. It is rare to see this in other locations such as the kidney. This study analyzed hydatid cyst in nephrectomy specimens.

Materials and Methods: A total of 1176 nephrectomy specimens were analyzed between 2001 and 2010 in the Department of Pathology at Azerbaijan Medical University, and hydatid cysts were only detected in eight cases (0.68%). Demographic and clinical information and histopathological reports of these cases were analyzed retrospectively.

Results: Five male patients (62.5 %) and three female patients (37.5 %) had hytadid cysts. At the time of diagnosis, the patients had a mean age of 42.7 years (range, 14 to 72 years); the males had a mean age of 40.3 years and the females had a mean age of 44.5 years. The average diameter of the hydatid cysts was 10.75 cm (range, 4 to 17 cm). Renal cell carcinoma was detected in only 2 cases (25%) concurrently with a hydatid cyst, and in 1 case (12.5%) a synchronous hydatid cyst was seen in the liver. The two cases of renal cell carcinoma with a concurrent hydatid cyst were in male patients aged 40 and 53. The tumor grades were T1b and T2a; the histologic type was clear cell, and the Fuhrman nuclear grade was 2 in both cases.

Conclusions: Kidney localization of a hydatid cyst is rare and was found in 0.68% of our nephrectomy series. Malignant tumors of the kidney can be associated with hydatid cysts, and such lesions should be excluded carefully in a differential diagnostic process.

Key Words: hydatid cyst, kidney, Fuhrman nuclear grade

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Impact of Pyleocalyceal Anatomy on Stone-free Rates after Percutaneous Nephrolithotomy (PNL)
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Introduction: The purpose of this study was to evaluate the impact of pelvicalyceal anatomy on stone-free rates of percutaneous nephrolithotomy (PNL).

Methods and Materials: We performed a descriptive, cross-sectional study of 240 patients who had received PNL in Tabriz in a 2-year time period. We divided the patients into 8 groups, depending on their anatomy of renal calyces (based on radiological findings): Group 1, absence of renal calyces; Group 2, minor renal calyces arising directly from the pelvis; Group 3, megacalyces; Group 4, orchid calyces; Group 5, multiple minor calyces and absence of renal calyces arising directly from the pelvis; Group 6, classic pyelogram; Group 7, extrarenal extension of the infundibula; and Group 8, elongated major calyces and infundibula. The data were analyzed using SAS 9.1 statistical software.

Results: Most patients were 40 to 50 years old. A total of 70.4% of patients were male and 29.6% were female. Overall, 66.2% of patients were stone free after PNL. Among patients in Group 6 (classic anatomy), the rate of being stone free after PNL was 79.46%. With an increase of about 3 calyces, the stone-free rate decreased about 92% (OR 0.8; 95% CI, 0.4-1.7). The length and diameter of the infundibules did not affect the stone-free rate.

Conclusions: This study showed that an increase in the number of calyces leads to a decrease in the stone-free rate after PNL. However, the diameter and length of the calyceal infandibulum did not affect the stone-free rate after PNL. Evaluation and study of pelvicalyceal anatomy before PNL is important to determine the type of treatment for kidney stones and to predict PNL results. There is a lack of adequate studies in this field. More investigations, including prospective studies, are needed.

Key Words: urolithiasis, percutaneous nephrolithotomy (PNL), pelvicalyceal anatomy, stone free rate

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Horseshoe Kidney Affected by Xanthogranulomatous Pyelonephritis: A Case Report
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Introduction: Urinary tract anomalies predispose patients to many complications, including infection, obstruction, stasis, calculus formation, and impaired renal function. Xanthogranulomatous pyelonephritis is an uncommon chronic inflammatory renal disease that is more often seen in middle-aged women and is also rarely seen in cases of renal congenital abnormalities. We present a case of a teenaged patient with a horseshoe kidney affected by xanthogranulomatous pyelonephritis.

Materials and Methods: We report the case of a 17-year-old female patient who underwent bilateral nephrectomy for hydronephrosis of a horseshoe kidney. We discuss the clinical and pathological findings for this patient.

Results: A 17-year-old woman presented to the urology department with chronic fatigue and anemia. A computed tomography scan of the abdomen revealed bilateral hydronephrosis and pelvic urolithiasis. The patient elected to undergo bilateral nephrectomy. Grossly, there was distension and dilation of the renal pelvis and calyces and atrophy of the renal parenchyma in the horseshoe kidney. The pelvis contained purulent exudate and stones. Microscopically diffuse infiltration of the atrophic renal parenchyma by lymphocytes and plasmatic cells and aggregates of foamy macrophages were seen. Histopathological examination of the specimen revealed xanthogranulomatous pyelonephritis.

Conclusions: Xanthogranulomatous pyelonephritis can be seen in teenagers in rare cases and can occur as a complication of renal congenital abnormalities.

Key Words: horseshoe kidney, renal anomaly, xanthogranulomatous pyelonephritis

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Renal Diseases Associated with Congenital Anomalies of the Kidney
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Introduction: The kidney is the most common site of congenital abnormalities. Some cause no problems, but many result in impaired renal function. Renal malformations often lead to kidney surgery. Nephrectomy specimens from kidneys with congenital anomalies were analyzed in the present study.

Materials and Methods: A total of 1176 nephrectomy specimens were analyzed between 2001 and 2010 in the Pathology Department of Azerbaijan Medical University, and congenital anomalies were detected in 73 cases (6.2%). Demographic and clinical information and histopathological reports of these cases were analyzed retrospectively.

Results: Forty-seven patients were male (64.4 %) and 26 patients were female (35.6 %). They had a mean age of 18.39 years (range, 7 months to 69 years) at the time of diagnosis. Fifty-one patients (69.9%) had congenital ureteropelvic junction obstruction, 2 patients (2.7%) had agenesis of the contralateral kidney, 2 patients (2.7%) had renal fusion, 9 patients (12.3%) had duplication of the renal pelvis, 8 patients (10.9%) had ectopic kidney, and 1 patient (1.4%) had ectopic kidney with pelvic duplication. Hydronephrosis was the most common complication of renal anomalies (N=61; 83.5%). Renal cell carcinoma was detected in only 2 patients with a renal anomaly (2.7%). It was seen in a 46-year-old male patient and a 56-year-old male patient, and the associated anomaly was pelvic duplication in both cases. The tumor grades were T1a and T2a, and the Fuhrman nuclear grades were 1 and 2, respectively.

Conclusion: The most common complication in renal anomalies was hydronephrosis. Renal malignancies were detected in 2.7% of the cases, exclusively in males with pelvic duplication of the kidney.

Key Words: renal diseases, congenital renal anomalies, malignant tumors

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Surgical Penis Augmentation: Importance of Penis Suspensory Ligaments
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Introduction: Penis suspensory ligaments are sectioned during penis enlargement procedures. Good knowledge of their anatomy is compulsory for surgical accuracy. Triangular and fundiform ligaments ensure penis position during erection. Sectioning these ligaments may have consequences on penis position during erection and might impede intercourse.

Materials and Methods: We dissected 20 human cadavers in the Gross Anatomy Laboratory. We isolated the penis ligaments and described them as well as the penis curvature, the superior external pudendal blood vessels, and the dorsal penis vessels and nerve.

Results: The apex of the triangular ligament faces the umbilicus and the base faces the pre-pubic curvature of the penis. This ligament superposes over the last few centimeters of the linea albea and the anterior aspect of the pubic symphysis. The superior external pudendal blood vessels reach the posterior surface of the penis after passing posterior to this ligament. The fundiform ligament is a bundle of connective tissue fibers that attach to the pubic symphysis and cross underneath the sub-pubic curvature of the penis. By sectioning the penis suspensory ligaments, an apparent penis elongation of 2-3 cm can be obtained. The penis is detached from its normal attachment to the pubic symphysis and loses its stability.

Conclusions: Both penis ligaments consist of constant and dense connective fibers. Surgical section of suspensory ligaments of the penis may lead to a penis enlargement of 2 to 3 cm. It also lowers and increases the pre-pubic curvature of the penis, leading to penis instability during erection and altered sexual activity.

Key Words: penis enlargement, suspensory ligaments, symphysis region

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The Embryological Basis of Congenital Penile Pathology
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Introduction: The genital tubercle is formed by fusion of the anterior extremities of the genital folds. This differentiates to form the penis. On the ventral side of the genital tubercle, the urethral folds unite forming the urethral plate, which becomes the penile urethra.

Material and Methods: Using a high-resolution digital camera, we photographed the mesocolic aspect of the embryonic structures involved in the formation of the penis. The study involved eight 7-to 9-week-old human embryos collected with maternal consent from a gynecology clinic.

Results: We highlighted the genital tubercle in 7-week-old embryos. This included the genital folds, the formation and fusion of the urethral folds, the proctodeum, and the caudal process. The 8- and 9-week-old embryos in the study revealed the evolution of the genital tubercle and the formation of the penis gland.

Conclusion: Images suggesting the evolution, differentiation, and location of scrotal folds were highlighted. We also presented malformations of the genital tubercle, such as evolution arrest, navicular fossa atresia, urethral atresia, and hypospadias.

Key Words: genital tubercle, urethral folds, proctodeum, hypospadias

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Anatomical Approach to the Pelvic Floor
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Introduction: The pelvic floor is in a horizontal position and shaped like a hammock. It is formed by three layers, from top to bottom (deep to superficial): the pelvic fascia, the pelvic diaphragm, and the perineum.

Materials and Methods: Muscles composing the pelvic floor completely close the inferior pelvic aperture, which is the lower gap of the pelvis. Muscles composing the perineal floor close the front side of the same gap triangularly.

Results: Endopelvic fascia, which is clinically very important, and intrapelvic structures encircle the pelvic floor muscles from their inner surfaces. This fascia is comprised of fibrous bonds, called ligaments, which become thick between some pelvic structures that the fascia hold. Pubocervicovaginal fascia, ATLA, ATFP, cardinal ligament, pubourethral ligament, and sacrouterine ligament can be examples of these ligament structures. Pelvic floor defects usually occur together. In surgical processes that involve the pelvic floor, such as urogynecologic and prolapsus surgery, changes in the position of the tissues which are on the front or rear side, during the restoration of muscles and fascias, lead to changes in the anatomy of the tissues that are on the front or rear side at the same time.

Conclusion: A good knowledge of the anatomy of the pelvic floor is needed when you repair a defect in that area of the body.

Key Words: pelvic fascia, pelvic diaphragm, perineum

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Landmarks of Radical Prostatectomy

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Introduction: A radical prostatectomy (RP) is a surgical procedure that removes the prostate gland and attached seminal vesicles. RP is a treatment option for men with localized prostate cancer. The morbidity after RP for prostate cancer has been reduced through improved understanding of the surgical anatomy of the prostate. Defining certain landmarks during RP has led to improved surgical techniques with reduced blood loss and minimized damage to surrounding tissues. In this video, we aimed to develop and validate an RP operation and steps of this technique.

Materials and Methods: RP was performed on a patient under general anesthesia. He was referred for surgery after he had an incidental elevated PSA level of 7.24 ng/dL. The pathology results were Gleason score 3+3 = 6/10 and prostate adenocarcinoma. RP steps were recorded with an endovision system while vascular structures were observed. The surgery steps were: opening the endopelvic fascia and making a limited incision of the puboprostatic ligaments; suture ligation and transection of the dorsal venous complex; dissection of the urethra and transection of the urethra; dissection of the prostate from the neurovascular bundles; transection and reconstruction of the bladder neck; dissection of the seminal vesicles and ampullary portions of the vasa deferentia; and performance of the vesicourethral anastomosis.

Results: RP was performed in a 2.5-hour procedure. Each step was defined and surgical landmarks were observed. This technique allowed us to perform careful removal of the prostate with minimal damage to the surrounding tissues.

Conclusion: An understanding of the anatomy and the landmarks of RP improves the success of this technique. Definition of landmarks make it more convenient to perform RP.

Key Words: radical prostatectomy, anatomy, prostate cancer

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Initial Experience of Transperitoneal Laparoscopic Radical Prostatectomy without Suture Ligation of the Dorsal Vascular Complex

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Introduction: We aimed to determine whether it is possible to perform laparoscopic radical prostatectomy (LRP) without suture ligation of the dorsal vascular complex.

Materials and Methods: We used a harmonic scalpel to control DVC before apical dissection and urethral division. Fourteen patients underwent transperitoneal laparoscopic radical prostatectomy using this technique. DVC was exposed, and then superficial complex and deep complex were selectively transected using a harmonic scalpel under direct vision. The patients had a mean age of 71 ± 5.8 years and a median prostate specific antigen (PSA) value of 7.9 ng/mL (interquartile range, 6.4-10.8).

Results: We were able to finish the procedure without open conversion. No additional securing technique was needed to control bleeding. The postoperative hemoglobin level was 13.2 ± 1.4 g/dL and the intraoperative hemoglobin was 11.4 ± 1.5 g/dL. The mean blood loss was 800 ±360 mL, and transfusion was performed in 1 patient postoperatively and 9 patients intraoperatively. Five patients had a remnant positive margin. Three patients had continence 3 months after surgery and 11 patients were using 2 to 5 pads per day at 1-month postoperative follow-up.

Conclusions: The ligation of the dorsal vascular complex, which is always necessary during open prostatectomy, is not necessary during LRP, in our experience. It needs further evaluation in carefully designed, large-scale, prospective, randomized clinical trials to assess the effectiveness of this technique.

Key Words: transperitoneal, laparoscopic, radical prostatectomy, dorsal vascular complex

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A Late Complication of Chronic Myeloid Leukemia: Testis Involvement after 10 Years of Complete Response

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Introduction: In addition to known indications such as a tumor in the solitary testicle or bilateral tumors, partial orchiectomy can also be performed in patients with negative tumor markers and possibly benign tumors.

Material and Methods: A 21-year-old male patient presented with right-side scrotal swelling of two months duration. Physical examination revealed a painless nodule nearly 2 cm in diameter in the right testis. A clinical diagnosis of testicular neoplasm/epididymal cyst was made. Scrotal ultrasonography revealed a 2-cm, well defined, heterogeneous, hypoechoic solitary mass in the same testis.

Results: Partial orchiectomy was planned for the patient. Perioperative findings were: two nearby lesions in the lower pole of the testis, 15 x 5 mm and 5 x 5 mm in diameter. Tumor excision and biopsies of the resection bed were performed. Frozen examination revealed malignant cells with blastic cell infiltration with sparse lymphocytic infiltrate. Due to these conditions, it was planned to perform high inguinal orchiectomy. The surgery was performed without any complications. According to those findings the patient was diagnosed as having a late relapse of chronic myeloid leukemia in the testicle.

Conclusion: The differential diagnosis for infiltrative processes involving the testis includes orchitis, sarcoidosis, lymphoma, benign cysts, tuberculosis, and germ/ non germ cell neoplasia of the testis. After a complete response of such hematologic disorders, late relapses must be kept in mind. The blood-testis barrier may be a factor of early and late relapses since this barrier decreases the effect of many chemotherapy regimens.

Key Words: chronic myeloid leukemia, testis involvement