

Video presentation

Laparoscopic antrophic nephrolithotomy

Mohammad Aslzare^{1*}, Amir Abbas Asadpour², Alireza Akhavan Rezayat³, Abdolhay Etesami⁴

Associate Prof. of Urology , Endourology & Laparoscopy, Robotic & Urooncology , Mashhad University of Medical Sciences

Assistant Prof. of Urology, Mashhad University of Medical Sciences, Mashhad, Iran.

Assistant Prof. of Urology, Mashhad University of Medical Sciences, Mashhad, Iran.

Resident of Urology , Mashhad University of Medical Sciences, Mashhad, Iran.

*Presenting Author: Mohammad Aslzare

Introduction: Nowadays ESWL, PCNL & RIRS are therapeutic options for kidney stones in different conditions. Sometime laparoscopic procedures can be used for upper ureteral stone & single renal pelvic stones.

Methods: A 33years old man with left flank pain gross hematuria referred to us with a left complete staghorn.

Results: He underwent, laparoscopic antrophic nephrolithotomy operative time was 120min, estimated blood loss was about 50cc.

Conclusion: Hospitalization was uneventful for 3day. There was no urine leak from drain laparoscopic antrophic nephrolithotomy is an feasible & safe option and can be performed as a minimally invasive procedure instead of open surgery.

Keywords: laparoscopy; nephrolithotomy

Rare Presentation of H-Type Ectopic Ureter in a Single System Managed by Laparoscopic Nephroureterectomy

Pejman Shadpour, Asghar Alizadeh, Kaveh Mehravaran, M Mehdi Atarod, Farshad Gouran,
Roozbeh Roohinezhad*

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Roozbeh Roohinezhad

Background: By definition, an ectopic ureter is any ureter, single or duplex, that does not enter the trigonal area of the bladder. In a duplex system this is usually the upper pole ureter, presumably because of its budding from the mesonephric duct later than the lower pole with later incorporation into the developing urogenital sinus. Theoretically in males the orifice may end ectopically anywhere in the urogenital system above the external sphincter or pelvic floor, but in reality this is almost always at the bladder neck or prostatic urethra. The least common presentation is ending into Wolffian structures, ie, the vas, seminal vesicle, or ejaculatory duct entailing infection and pain in the affected organs.

Single-system ectopic ureters are far less common, and one presenting with H type ectopia manifesting in an apparently absent kidney is extremely exceptional.

Case Report: This 44 year old man had suffered from recurrent epididymo-orchitis many years ago. His sonography reported no left kidney. On CT scan with IV contrast the left ureter led to a nonfunctioning remnant cephalad, and to the left seminal vesicle caudally, hence an H type ectopia without duplication. Laparoscopic nephroureterectomy in modified flank approach was utilized in this case.

Conclusion: This is the rarest type of ectopia and laparoscopy affords definitive diagnosis and definitive surgical management all at once.

Keywords: ectopic ureter; single system ectopic ureter; H type ectopic ureter; laparoscopic; nonfunctional Kidney

Laparoscopic Right Side Donor Nephrectomy with Inadvertent Clipping of Renal Artery Branch and its Management

Naser simforoosh¹, Mohammad Najafi-Semnani¹, Saman Farshid^{2*}, Hamid-Reza Akbari Gilani¹, Iman Ganaat^{1,3}

¹Shahid Labbafinejad Hospital, Urology and Nephrology Research Centre (UNRC), Shahid Beheshti Medical University, Tehran, IR Iran.

² Department of Urology, Urmia University of Medical Sciences, Urmia, Iran.

³ Department of Urology, Isfahan University of Medical Sciences, Isfahan, Iran.

*Presenting Author: Saman Farshid

Introduction: Laparoscopic Right donor nephrectomy is reserved for instances when the left kidney is determined to be unacceptable for transplantation. Indications most often cited are multiple left renal arteries or veins, anomalous left anatomy, smaller right kidney, or a cystic mass in the right kidney, Duplication of renal vein is more common on the right side and is reported as much as 15% of potential renal donors.

Case Presentation: recipient was 55 y/o female with history of graft rejection 2 years ago Donor was 32 y/o male without any surgical history, according to CT- Angiography multiple artery in left side and single right side artery with early branching was noticed, so donor was scheduled for right side laparoscopic nephrectomy, during laparoscopy accessory right side vein was found, right renal artery was freed under IVC upto 1cm before early branching, at the time of clipping the accessory renal vein, renal artery branch behind the vein was being stuck inside vein hemo-lock, so another double hemo-lock was placed proximal to previous accessory vein hemo-lock, renal accessory vein was cut off from IVC without cutting artery branch, renal artery was cut-off after clipping the artery proximal to early branching, renal artery branch stuck inside vein hemo-lock was separated after extraction of vein hemo-lock. Back-Table, finally after graft anastomosis in recipient urine output was 2.5 liter, during follow up evaluation there was no sign of vascular thrombosis in Color Doppler study.

Conclusion: studies on right side laparoscopic donor nephrectomy confirm that right laparoscopic donor nephrectomy provides similar patient benefits, including early return to diet and discharge. Long-term creatinine values were no higher than in traditional open donor or left laparoscopic donor cohorts. concerns about high thrombosis rates are not supported by a multiinstitutional review of laparoscopic right donor nephrectomies.

Keywords: Laparoscopy; Veins; Kidney Transplantation

Laparoscopic Pyeloplasty in a Boy with UPJO Secondary to High Grade Reflux

Farzaneh Sharifi Aghdas¹, Saman Farshid², Hamid Akabri Gilani¹

¹Shahid Labbafinejad Hospital, Urology and Nephrology Research Centre (UNRC), Shahid Beheshti Medical University, Tehran, IR Iran.

²Department of Urology, Urmia University of Medical Sciences, Urmia, Iran.

*Presenting Author: Saman Farshid

Introduction: Ureteropelvic junction obstruction (UPJO) and vesicoureteric reflux (VUR) are the most common pathological conditions in pediatric urology, with 9%–14% of patients with UPJO likely to have concomitant VUR. Whether the coexistence is a random event, attributable to a single developmental abnormality or due to ureteral kinking and inflammation caused by VUR has not yet been established.

Case Presentation: patient was 8 y/o boy with history of recurrent episode of UTI after imaging evaluation, right side UPJO and VUR was identified, right side DRF was 30 % according DMSA-Scan. This patient was Scheduled for Pyeloplasty and VUR correction with Deflux injection. During Laparoscopy after releasing the UPJ from peripheral attachments, severe tortuosity of proximal ureter lead to UPJO was noticed, the excess and tortuous part of ureter was cut and Dismembered pyeloplasty with 5-0 vicryl was done, 2 months later patient underwent deflux injection for VUR correction, during follow-up visits up to 6 months after surgery fortunately patient hasn't experienced any Episode of UTI.

Conclusion: At the time of surgery, if a dilated ureter is found below the UPJO, the operating surgeon will not be sure if it is due to vesicoureteric junction obstruction, megaureter or VUR if a preoperative VCUG has not been done, improvement in kidney drainage in patients who had UPJO secondary to high grade reflux lead to function improvement despite the existence of VUR and pyeloplasty should not be postponed until reflux resolves.

Keywords: pyeloplasty; ureteropelvic junction obstruction; vesicoureteric reflux

Laparoscopic Ureteric Reimplantation of a Single System Ectopic Ureter in a Girl

Alireza Golshan

Mashhad University of Medical Sciences, Mashhad , Iran.

Introduction: In published literature, 80% of ectopic ureters arise from the upper pole of a completely duplicated system. Ectopic ureters draining single systems are not common, occurring only in 20% of cases. Again, ectopic ureter draining single system in case of females is extremely rare. We report a case of a 15-year-old girl having single-system ectopic ureter undergoing laparoscopic ureteric reimplantation.

Methods: A 15-year-old girl presented with continuous dribbling of urine along with normal voiding pattern since childhood. There was no urgency, frequency, dysuria . There was no history suggesting stress incontinence. Physical examination was unremarkable. Urinalysis showed 2-3 pus cells/hpf, and urine culture revealed no growth. Blood biochemical parameters were within normal limits. Ultrasonography of the kidneys, ureters revealed severe left hydroureteronephrosis , with normal cortical echotexture and corticomedullary differentiation. right kidney was normal,. Intravenous urography showed excretion of contrast through both kidneys, with delay from the left kidney. Both pelvicalyceal systems and ureters were visible and showed bilateral single system. On cystourethroscopy, urethra, bladder, right ureteric orifice were found to be normal, but left ureteric orifice was dilated and located on the bladder neck.

Results: Under general anaesthesia, patient was placed supine in 20-degree trendelenberg position. Four-ports technique was used. Procedure was started by incising the peritoneum just above the bifurcation of common iliac vessel. Right ovary and fallopian tube were mobilized, and infundibulopelvic ligament was transected after clipping. Ureter was dissected and followed up to its insertion into the bladder, avoiding any injury to adventitial tissue. Ureter was clipped near its insertion into bladder and transected . A tunnel was adequately dissected to obtain 5:1 ratio of length to width. Ureter was spatulated, bladder mucosa was incised, and mucosal-to-mucosal anastomosis was done initially with three interrupted sutures at the heel of spatulation using 4-0 polyglycolic suture, and 5-Fr DJ stent was put . Rest of the anastomosis was completed with continuous suturing. Bladder muscle flaps were then approximated using 4-0 polyglycolic suture. Abdominal tube drain was put via right lateral 10-mm port. Operative time was 165 minutes. One month postoperatively, the stent was removed. At 3 months' follow-up, intravenous urography showed no obstruction, and micturating cystourethrogram showed no reflux. And the patient has no complain of incontinency.

Conclusion: Laparoscopic procedures offer reduced morbidity due to less postoperative pain, better cosmesis, earlier return of bowel function, earlier discharge and a quicker return to work. In view of these advantages and significant renal function in our patient, we preferred laparoscopic ureteric reimplantation in our patient.

Keywords: ectopic ureter; laparoscopic reimplantation

Bilateral laparoscopic Ureteral Reimplantation in a Patient with Endometriosis: A Case Presentation

Robab Maghsoudi^{1*}, Ameneh Sadat Haghgoo², Saeed Esmacil Soufian¹, Mehran Moghimian¹

¹Urology Department of Firoozgar Hospital, Iran University of Medical Sciences, Tehran, Iran.

²Gynecology and Infertility Department of Nikan Hospital, Tehran, Iran.

*Presenting Author: Robab Maghsoudi

Purpose: Ureteral involvement is one of the most important problems that can be occurred during endometriosis and usually lead to urinary tract obstruction, with subsequent hydroureter, hydronephrosis, and potential kidney loss. In this video we present our experience in a patient with bilateral ureterovesical junction obstruction by laparoscopic procedure.

Case Presentation: A 35 years old woman with advanced endometriosis referred to our department. she had a history of multiple surgeries for her problem in the past years. despite the surgical intervention there was documentation of renal atrophy and function loss due to bilateral obstruction on subsequent workup, so we decided to perform another surgical intervention and we planned bilateral laparoscopic reimplantation for her. by a transperitoneal laparoscopic approach bilateral ureteroneocystostomy performed. Dj stents inserted for both ureter and after 8 weeks they removed. We didn't have any major complication during the intra and post-operative period and in 3 months' post-surgery intravenous pyelogram there wasn't any significant obstruction.

Conclusion: In endometriosis related ureteral obstruction tolaparoscopic reimplantation can be an option in hands of enough experience safely.

keywords: Endometriosis; laparoscopy; ureteroneocystostomy

Laparoscopic Ureteropyelolithotomy in Pediatric Age

Mohammad-Hossein Soltani¹, Mohsen Varyani², Hamid-Reza Akbari Gilani^{1*}

¹Urology and Nephrology Research Center, Shahid Labbafinejad Medical Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

²Khanevade Hospital, Iran Army University of Medical Sciences, Tehran, Iran.

*Presenting Author: Hamid-Reza Akbari Gilani

Purpose: To evaluate the feasibility of simultaneous laparoscopic surgery of renal and ureteral stone in pediatrics.

Materials and methods: A 9 y old girl with PMH of open pyelolithotomy referred for left renal and proximal ureteral stone. She underwent laparoscopic ureteropyelolithotomy in the same session. The ureter over the stone was opened and after ureteral stone extraction, the incision was extended proximally toward renal pelvis and renal stone was extracted.

Result: The renal and ureteral stone was extracted laparoscopically in a 9 year old child an one session.

Conclusion: Simultaneous laparoscopic surgery of ureteral and renal stone is safe and feasible in pediatric age group.

Keywords: laparoscopy; urinary stone; pediatrics

Laparoscopic Pyelolithotomy in 11 Month Old Infant

Mohammad-Hossein Soltani¹, Saman Farshid², Hamid-Reza Akbari Gilani^{1*}

¹Urology and Nephrology Research Center, Shahid Labbafinejad Medical Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

²Nephrology and Kidney Transplant Research Center, Urmia University of Medical Sciences, Urmia, Iran.

*Presenting Author: Hamid-Reza Akbari Gilani

Purpose: To evaluate safety and feasibility of mini laparoscopic renal stone surgery in infancy.

Materials and methods: A 11 m old infant with fever, and left hydronephrosis referred from a pediatric center. He was diagnosed by ultrasonography and plain abdominal X ray to have renal stone. He underwent mini laparoscopic pyelolithotomy.

Result: The patient had no fever and improved general condition immediately after surgery. The operation and postoperative convalescence period were uneventful.

Conclusion: Laparoscopic pyelolithotomy is safe and feasible in infancy period and can be done in even febrile patient.

Key words: laparoscopy; urinary stone; infancy

Laparoscopic Partial Nephrectomy with Zero Ischemia Time

Mohammad-Hossein Soltani¹, Mohsen Varyani², Hamid-Reza Akbari Gilani^{1*}, SA Aslani¹

¹Urology and Nephrology Research Center, Shahid Labbafinejad Medical Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

²Khanevade Hospital, Iran Army University of Medical Sciences, Tehran, Iran.

Presenting Author: Hamid-Reza Akbari Gilani

Purpose: To evaluate the feasibility of zero ischemia laparoscopic partial nephrectomy in a young adult woman.

Materials and Methods: A 34 y old woman with incidentally found 18 mm right upper pole renal mass in ultrasonography and CT scan was referred to our hospital. He underwent laparoscopic partial nephrectomy with zero ischemic time.

Result: The operation and postoperative convalescence period were uneventful. The final pathology was metanephric adenoma.

Conclusion: Laparoscopic zero ischemia partial nephrectomy in small exophytic renal mass is safe and feasible.

Key words: laparoscopy; renal tumor; partial nephrectomy; zero ischemia

Laparoscopic Radical Nephrectomy and Pelvic Cyst Removal

Farzaneh Sharifi Aghdas¹, Mohsen Varyani², Z Bartani¹, Hamid-Reza Akbari Gilani^{1*}

¹Urology and Nephrology Research Center, Shahid Labbafinejad Medical Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

²Khanevade Hospital, Iran Army University of Medical Sciences, Tehran, Iran.

*Presenting Author: Hamid-Reza Akbari Gilani

Purpose: To evaluate feasibility of simultaneous radical nephrectomy and ovarian cyst removal in one session.

Materials and Methods: A 51 y old woman with left renal mass and large pelvic cyst referred to our center. She underwent Lt Lap radical nephrectomy and pelvic cyst was removed through Pfan incision at the time of kidney extraction.

Result: The operation and postoperative convalescence time were uneventful. The final pathology was Renal RCC T2 N0 M0 and ovarian mucinous cystadenoma.

Conclusion: Simultaneous laparoscopic radical nephrectomy and ovarian cyst removal is safe and feasible.

Keywords: laparoscopy; renal tumor; pelvic cyst

Laparoscopic RPLND

Abbas Basiri¹, Saman Farshid², Hamid-Reza Akbari Gilani^{1*}, Iman Ghanaat¹

¹Urology and Nephrology Research Center, Shahid Labbafinejad Medical Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

²Nephrology and Kidney Transplant Research Center, Urmia University of Medical Sciences, Urmia, Iran.

*Presenting Author: Hamid-Reza Akbari Gilani

Purpose: To evaluate the feasibility of laparoscopic RPLND in testicular stage 1 mixed germ cell tumor.

Materials and Methods: A 36 y old man with PMH of left testis tumor referred to our hospital after radical orchiectomy. The pathology was mixed germ cell tumor (80% seminoma, 20% yolk sac tumor), tunica, margin and spermatic cord were intact. Lymphovascular invasion was present. Tumor markers became normal after orchiectomy (AFP: 10261.6 - bHCG was normal). Abdominopelvic CT scan was normal. He underwent laparoscopic RPLND.

Results: The operation and postoperative convalescence period were uneventful. The pathology report was free of germ cell tumor.

Conclusion: Laparoscopic RPLND is safe and better tolerated especially in stage 1 mixed germ cell tumor.

Keywords: laparoscopy; RPLND; testis tumor

Is it Possible to Do Laparoscopic Live Donor Nephrectomy in Presence of Left Inferior Vena Cava

Nasser Simforoosh¹, Iman Ghanaat^{1*}, Hamidreza Akbari Gilani¹

¹Urology and Nephrology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

*Presenting author: Iman Ghanaat

Introduction: Left inferior vena cava (IVC) is a rare anatomic vascular variation in normal population. When we decide to do live donor nephrectomy in this case, selection of modality of surgery could be debated. We want to show feasibility of laparoscopic method and complications.

Material and Methods: We encountered a 24-year-old male, who was an ideal candidate for live donor nephrectomy, that in his CT-angiogram had left-sided IVC with single renal artery and vein in both kidneys. So we decided to do laparoscopic left-sided live donor nephrectomy.

Result: In October 2019, we did laparoscopic nephrectomy of live donor in transperitoneal method after colon medialization and clipping ureter, renal vein of its origin at left IVC, that was closer to the left kidney from renal artery, and renal artery without any complication or abnormal bleeding or conversion to open surgery. The patient discharge was done 2 days after with good condition.

Conclusion: In left-sided IVC we can perform laparoscopic live donor nephrectomy without any difficulty or complication and help the patient to pass shorter recovery period.

Keywords: Laparoscopy, live donor nephrectomy, left inferior vena cava.

Feasibility of Laparoscopic Resection of Renal Capsular Endometriosis

Abbas Basiri¹, Iman Ghanaat^{1*}, Hamidreza Akbari Gilani¹

¹Urology and Nephrology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Presenting Author: Iman Ghanaat

Introduction: The ectopic endometrial tissue, endometriosis, seldom occurs outside of the reproductive organs. Urinary tract endometriosis is uncommon, accounting for only 1.2% and endometriomas involving the kidneys are extremely rare, accounting for less than 1%. There are a few reports of renal endometriosis

Objective: The aim was to evaluate the possibility of laparoscopic resection of renal endometriosis in malrotated kidney.

Material and Method: In September 2019, a 37-year-old female with menstrual-related right flank pain, microscopic hematuria and right renal capsular mass that was proven to be endometriosis in percutaneous renal mass biopsy without another problem or endometriosis in the other site of body, underwent laparoscopic renal mass resection

Result: Capsular malrotated-renal endometriosis resection done in transperitoneal laparoscopic method after colon medialization and access to mass with safe margin without any complication or abnormal bleeding intra or postoperation. The patient discharge done 2 days after with good condition and pain and hematuria disappeared in follow up.

Conclusion: Laparoscopic transperitoneal resection of renal capsular endometriosis is possible without significant complication or extended incision with minimally invasive surgery.

Keywords: laparoscopy; endometriosis; renal capsul; malrotated kidney

Endoscopic Management of Large Ureteral Tumor: A video presentation

Akbar Nooralizade, Seyed Arsalan Aslani*

Labafenejad hospital, Shahid Beheshti University medical science.

*Presenting Author: Seyed Arsalan Aslani

Purpose: Evaluation of endoscopic management of ureteral tumor

Method: 36 Years old woman, referral to our clinic due to it side hydronephrosis, intravenous pyelography was done a large ureteral tumour was detected patient ureter went uretero... and tumour was found, with biopsy grasper tissue send for pathologist, the primary result is von-burn-nest hyperplasia.

Results: The final pathology, is pyelitis cystically and glanularis. This tumour has benign behaviour with high rate of recurrence.

Conclusion: Endoscopic management of benign tumour in ureter is feasible but need long follow up.

Keywords: endoscopy; ureter; tumor

Laparoscopic Management of ureteral stricture in kidney transplant, a video presentation

Nasser Simforoosh, Seyed Arsalan Aslani*

Labafenejad hospital, Shahid Beheshti University medical science.

*Presenting Author: Seyed Arsalan Aslani

Purpose: Ureteral stricture is a common problem in patients with history of kidney transplantation. Laparoscopic management of ureteral stricture is challenging and the efficacy of this surgical method is under question.

Methods: A patient who referral to our clinic due to rising creatinine with hydronephrosis on transplanted kidney. Nephrostomy inserted and nephrostography showed a stricture at the distal part of ureter. the patient scheduled for laparoscopic ureteroneocystostomy

Results: On the general anesthesia at supine position laparoscopic ureteral-feimplantation trocars, 12mm, 5mm, 5mm, 5mm, inserted with diamond shape, after hard effort, the ureter was found at level of ureteropelvic junction, so dissection was continuous Meticulously up to site of ureteral stricture. the ureteres dissected , and anestomas to bladder with modified lick method.

Conclusion: Laparoscopic management of ureteral stricture in kidney transplant is safe and effective, but need long follow up.

Keywords: laparoscopy; stricture, transplantation, ureter

Antegrade Ureteroscopy in Patient with History of Ileal Loop Diversion and Distal Ureteral Stenosis.

Kaveh Mehravaran, Massoud Etemadian, Pejman Shadpour, Mayhar Fasihi *, Ahmadreza Rafati, Asghar Alizadeh, Said Pakdel , Mohamad Mehdi Atarod , Farshad Gooran, Roozbeh Roohinezhad .

Hasheminejad Kidney Center, Iran University of Medical Sciences, Tehran, Iran.

*Presenting Author: Mayhar Fasihi

The patient is a 60 years-old male who had presented with left flank pain and raising of creatinine and left hydro-nephrosis. In nephrostography ,left distal ureteral stenosis were observed. The patient had under went one previous failed attempts at retrograde ureteroscopy in our center before .During flexible ureteroscopy, the site of stenosis was found and check by fluoroscope and the gaid wire pass from stricture and confirmed by fluoroscope then by a zebra dilator through guide wire the stenosis was dilated and retrograde ureteroscopy done to check it and then dj stent was inserted in the system . Operation duration was 1 hours. Postoperative pain was minimal not necessitating administration of narcotics. The patient was discharged 1 days after operation with no complication.

Keywords: ureteroscopy; ileal loop; diversion; stenosis

Lower Calyce Stone with Calyceal Stenosis Treated with Retrograde Intera Renal Surgery (RIRS).

Kaveh Mehravaran ,Massoud Etemadian, Pejman Shadpour, Mayhar Fasihi *, Ahmadreza Rafati, Asghar alizadeh, Said pakdel , Mohamad Mehdi atarod ,Farshad gooran, Roozbeh roohinezhad .

Hasheminejad Kidney Center, Iran University of Medical Sciences, Tehran, Iran.

*Presenting Author: Mayhar Fasihi

The patient is a 43 years-old female who had presented with left flank pain. In ultrasonography and CT scan without contrast, left lower calyceal stone were observed. The patient had underwent 2 previous failed attempts at ESWL in another center before referral. During flexible ureteroscopy, the all calyce search for stone but stone not found and at the end one pin point orifice was found that by a fiber of holmium laser the orifice was dilated and passed uretroscop in to the calyce and found stone in stenotic calyce. Operation duration was 1 hours. Post-operative pain was minimal not necessitating administration of narcotics. The patient was discharged 1 day after operation with no complication.

Keywords: RIRS; nephrolithiasis; stenosis

Partial nephrectomy with two-layer reconstruction of resection bed: Iranian adoption alternative (Video)

Amir H Kashi, Hamid-Reza Akbari Gilani*, Seyed Arsalan Aslani

Labbafinejad Hospital; Urology and Nephrology Research Center (UNRC), Shahid Beheshti University of Medical Sciences (SBMU), Tehran, Iran.

*Presenting Author: Hamid Akbari Gilani

Purpose: Two-layer reconstruction of renal bed in laparoscopic partial nephrectomy results in better cosmetic appearance and better salvage of renal parenchyma. This video represents an Iranian adopted model for two layer reconstruction of renal parenchymal bed using available sutures in Iran.

Methods: A middle aged man, known case of tuberous sclerosis presented with a 5cm central endophytic enhancing mass in right kidney. Brain CT scan revealed astrocytoma and eye exam revealed two hamartomatous lesion not needing any intervention. Skin hamartomatous lesions were observed on his back.

Results: A transperitoneal laparoscopic partial nephrectomy was planned. The tumour was resected after applying bulldog clamps on both renal artery and vein. Resection bed was reconstructed in first layer using 2-0 monocryl sutures. Warm ischemic time was 20 minutes. Bulldog clamps were released and after ensurance hemostasis, the edges of renal parenchyma was reconstructed using 2-0 Vicryl sutures.

Conclusion: This adaption ensures suturing of renal resection bed in 2 layers using common available sutures in Iran.

Keywords: partial nephrectomy; laparoscopy; bleeding

Oral Presentation

A 5 years Missed Nelatone Tube as a Stent Ureter which had been Inserted Post Peylonphrotomy

Afshar Zomorodi

Professor of urology and kidney transplant surgeon, Head of organ transplantation department, Imam Reza hospital, Tabriz Medical science university, Tabriz – Iran.

Background: Stenting of ureter is necessary sometimes after operation of ureter for prevention of leak and obstruction. It has been advised that at the maximum after three months, the stent must be removed. Many complications have been described for stent or jj in ureter. Even death may be associated with remained double j. In this paper we present a case with nelatone tube which had been inserted five years ago.

Case: A 40-year-old man with a history of nephrolithiasis was referred for LUTS and bladder stone. In evaluation of bladder stone, it was discovered that there is a stent in urinary system of left kidney (**figure1**). The patient was candidate for ESWL, After one ESWL, he was scheduled out for cystoscopy to remove the stent and remained of bladder stone. In cystoscopy with covering of antibiotic, nelatone in the ureter was easily removed which was intact (**figure 2**) and also the remained bladder stone.

Discussion:

Stenting of ureter is important for prevention of leak and obstruction of ureter. In almost all of ureter anastomosing of ureter in grafting of kidney stent is placed. Although stent prevents obstruction and helps the repairment of ureter, it may induce obstruction, infection and stone making. Time duration of stent and kind of stent, size of stent are important for inducing complication. If stent remains in ureter for a longer time, it may be associated with fragmentation and infection and stone. Late complications including stone, infection and migration and



Figure1. KUB: nelatone with left kidney

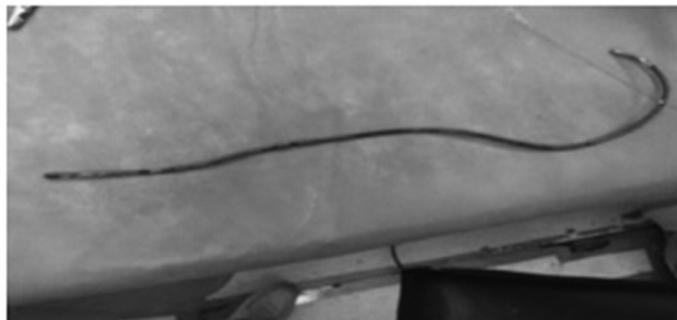


Figure2. Nelatone tube after 5 years missed, intact stent with a little encrustation

fragmentation in one third of patient may occur. Any complicated obstruction of urinary system may be need for inserting stent for treatment. Encrustation is precipitation of calcium and oxalate on biofilm on surface of stent, for forming biofilm on surface of stent it is necessary to adherence protein that it is presence in the urine and production of bacteria. Encrustation of stent depends to many factor including: time of presence of stent in system, history of nephrolithiasis, infection, biofilm, pregnancy and kind of stent. Forgotten stent may have many complications even death. In this case the stent was Nealtone tube which after remaining for 5 years forgotten it was not associated with a major problem.

Key words: stent; DJ; ureter stent; missed stent; missed DJ

Minimal Invasive PCNL(MPCNL) in Patients Under Age of 18

Mohammad Mehdi Hosseini*, Alaa Altofeyli, Ali Eslahi, Reza Haghpanah, Mitra Basratnia

Shiraz Nephrology-Urology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.

*Presenting Author: Mohammad Mehdi Hosseini

Purpose: Nowadays, Renal calculi is a common problem in children. ESWL is the first choice in this age group, but sometimes other interventions may be indicated. In such cases PCNL seems the less invasive and more safe option than open surgery. We evaluated the results and complications of the minimally invasive PCNL (MPCNL) in our referral training center.

Materials and Methods: Between September 2012 and May 2019, a total of 98 children under age 18 who had failure of and/or their parents refuse SWL underwent MPCNL (15 Fr). The procedure was done under general anesthesia, in prone position, with ureteral catheter 3 or 4 F, diluted contrast injection and fluoroscopic or ultrasonographic guided nephrostomy by Chiba needle 18G. Tract dilation performed with Alken telescopic dilators. Nephroscopy were done with 15 Fr. nephroscope. Lithotripsy was done with pneumatic lithoclast and saline solution used as irrigation. Nephrostomy tube was inserted in 17, tubeless (No nephrostomy) in 52, JJ in 4 and totally tubeless in 25 patients. Ureteral stent and foley catheter were removed 12-24 hours after operation.

Results: Of total 98 patients, 61 were boys and 37 girls. Mean age was 8.6 years (14 months-18 years) and mean stone size \geq 20mm. Mean operation time was 65 min (35-100) and radiation 0.6 min (0.2-1.4). 88 were stone-free, 5 patients had residual fragment less than 5mm, passed spontaneously in 2 weeks after operation, 3 underwent second look nephroscopy, and 2 ureteroscopy for migrated stone fragments to distal ureter. Post-operatively, 14 patients developed low grade fever, 1 sepsis, 4 transfusion, and 2 raising of normal creatinine which improved with conservative management.

Conclusion: MPCNL is recommended as safe alternative option for treatment of the nephrolithiasis in children.

Keywords: Nephrolithiasis; Pediatric; Percutaneous

Comparison of the Monoplanar and Biplanar Renal Access In Percutaneous Nephrolithotomy: A single Center Experience

Dariush Irani, Mohammad Mehdi Hosseini*, Reza Haghpanah, Kian Omidbakhsh

Endourology & Stone Unit, Urology Department, Shiraz University of Medical Sciences, Shiraz, Iran.

Presenting Author: Mohammad Mehdi Hosseini

Purpose: The aim of this study was to compare the clinical outcomes and complications of monoplanar and biplanar access techniques for percutaneous nephrolithotomy (PCNL).

Methods: In a prospective study, between March 2018 and August 2019, the data from patients who underwent monoplanar or biplanar fluoroscopy-guided access for PCNL in Faghihi hospital were compared. In monoplanar technique, a C-arm fluoroscope was brought into vertical position, the collecting system was visualized with a contrast agent, and the most appropriate calix was selected for access. In biplanar technique, puncture is adjusted based on different fluoroscopic projections including vertical and 30 degree positions.

Results: The monoplanar technique was performed for renal access in 176 patients (group 1), and the biplanar technique was used for renal access in 217 patients (group 2). There were no statistically significant differences between the two groups for demographic data, mean operative times, hospital stay ($P > 0.05$). While the mean puncture time and fluoroscopy screening time were significantly lower in monoplanar group when compared with that of biplanar group ($P = 0.000$). The monoplanar and biplanar groups had similar success rates of 84% and 86%, respectively ($P > 0.05$) and the rates of early postoperative complications also were similar for both groups.

Conclusion: There is similar success rates for monoplanar and biplanar access techniques, while monoplanar access technique is a safe technique with decreased puncture time and minimized surgical team and the patient's radiation exposure time.

Keywords: Percutaneous Nephrolithotomy; monoplanar; biplanar; fluoroscopy

A Randomized, Crossover, Pilot study of Carvedilol and Terazosin on Urinary Symptoms of Patients with Hypertension and Benign Prostate Hyperplasia.

Alireza Farshi¹, Nooriyeh DalirAkbari^{2*}, Afshar Zomorodi³, Mohammad Khalili⁴

¹Assistant Professor of Urology, Department of Urology, Imam Reza hospital, Tabriz university of medical sciences.

²Urology Resident, Department of Urology, Tabriz university of medical sciences.

³Assistant Professor of Urology, Department of Urology, Tabriz University of medical sciences.

⁴Ph.D of Nutrition, Neurosciences research center, Tabriz university of medical sciences.

*Presenting Author: Nooriyeh DalirAkbari

Purpose: The aim of the present study was to assess and compare the effects of carvedilol and terazosin plus enalapril on lower urinary tract symptoms (LUTS), urine flow, and blood pressure (BP) in patients with moderate hypertension (HTN) and benign prostatic hyperplasia (BPH).

Methods: In this randomized crossover trial, 40 men with HTN and LUTS symptoms were enrolled. The first group was treated with carvedilol, and the other group received terazosin plus enalapril. After eight weeks of treatment patients followed a one-month washout period, and then the treatments were changed and continued for eight weeks. To diagnose BPH, international prostate symptom score (IPSS) questionnaire was used in the study. Moreover, prostate-specific antigen (PSA), post-void residual (PVR) urine volume, and maximum urinary flow rate (Q-max) were measured using uro-flowmetry test too.

Results: Treatment with carvedilol or terazosin plus enalapril could significantly reduce systolic and diastolic blood pressure, PVR and PSA levels; however, changes in IPSS were not statistically significant. Also Qmax measurements in both groups indicated an increase in urinary flow rate. There were no significant differences between the mean values of systolic BP, IPSS, Qmax, and PSA reduction in both groups following the treatment ($P > 0.05$).

Conclusion: Carvedilol as compared with terazosin plus enalapril indicates similar effects on controlling LUTS in patients with moderate HTN and BPH. Further studies are required to investigate the efficacy of carvedilol compared with other alpha-blockers involving a large sample size and over a longer period of time.

Keywords: Benign prostatic hyperplasia; blood pressure, carvedilol

Comparison of Presence of Detrusor Muscle in Pathology Report of Monopolar Conventional TURBT and en-bloc TURBT

Koosha Kamali, Pejman Shadpour, Ehsan Zolfi, Nasrollah Abian^{3*}

Hasheminejad Kidney Center (HKC), Hospital Management Research Center (HMRC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Nasrollah Abian

Purpose: According to EAU 2018 guidelines, TURBT is the gold standard method for diagnosis and treatment of non-muscle invasive bladder tumor. It has been reported that in 50% of cases no detrusor was found in the specimen. The aim of this study is to compare presence of detrusor in specimens taken by conventional and en-bloc method.

Method: From September 2017 to September 2018, 60 patients with solitary papillary tumor sized less than 3 cm, and no prior history of bladder cancer were randomly divided into two groups: Conventional TURBT and en-bloc TURBT with monopolar hook. Mean operation time, perforation rate, and presence of detrusor muscle were compared between two groups.

Result: Mean operation time in en-bloc TURBT was 15.46 ± 3.52 minutes and in conventional TURBT was 20.6 ± 5.04 minutes. The mean operation time was significantly different between the two groups. No clinical bladder perforation was seen in the two groups. In 28 cases (93/3%) of en-bloc group the detrusor was seen in pathologic reports while presence of detrusor in pathology report was positive in 25 cases (83.3%) of the conventional group, this difference was not statistically significant.

Conclusion: En-bloc TURBT with monopolar hook was as effective as conventional method with no increase in bladder perforation and due to lower operation time it is a better option than conventional TURBT.

Keywords: Bladder cancer; TURBT; en-bloc; detrusor; hook electrode

A Posteriori Dietary Patterns are Associated with Urinary Risk Factors of Nephrolithiasis: Findings from a cross-Sectional Study on Iranian Men

Niloofarsadat Maddahi¹, Khadijeh Mirzaei¹, Seyed Mohammad Kazem Aghamir², Seyed Saeed Modaresi³,
Mir Saeed Yekaninejad⁴

¹Department of Community Nutrition, School of Nutritional Sciences and Dietetics, Tehran University of Medical Sciences (TUMS), Tehran, Iran.

²Department of Urology, Sina Hospital, Tehran University of Medical Sciences, Tehran, Iran.

³Urology Research Center, Sina Hospital, Tehran University of Medical Sciences, Tehran, Iran.

⁴Department of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.

*Presenting Author: Niloofarsadat Maddahi

Background & Aim: Dietary patterns have been identified as useful indicators of diet quality, but evidence regarding their association with the nephrolithiasis risk factors is still scarce. Therefore, we aimed to verify the relationship between dietary patterns and urinary risk factors of nephrolithiasis, including hypercalciuria, hyperuricosuria, hyperoxaluria, hypocitraturia, and abnormal creatinine.

Methods: A total of 264 apparently healthy male subjects, with mean age of 18-89 years, were enrolled in this cross-sectional study from September to December 2016, in Tehran, Iran. Dietary intake of participants during the preceding year was obtained using a 168-item semi-quantitative food frequency questionnaire and dietary patterns were derived by using factor analysis. The 24-

h urine samples were collected to measure urinary levels of nephrolithiasis risk factors. The relationships were tested with the use of binary logistic regression.

Results: Three major dietary patterns, explaining 45.87% of total variance of diet, including unhealthy, healthy and spice-caffeine patterns were identified. After adjustment for body mass index, age and energy intake, compared with people in the lowest tertile, the highest tertile of healthy dietary pattern was associated with the decreased odds of hypocitraturia (OR = 0.24, 95%CI = 0.10-0.56, $p = 0.001$) and hypercalciuria (OR= 0.20, 95%CI= 0.10-0.46, $p < 0.001$). In contrast, higher adherence to the unhealthy pattern was found to be positively related to the increased risk of hypocitraturia (OR = 5.14, 95%CI = 2.04-12.96, $p = 0.001$) and hypercalciuria (OR=4.11, 95%CI= 1.77-9.56, $p = 0.001$). Moreover, there was a direct association between the spice-caffeine dietary pattern with hyperoxaluri (OR = 2.90, 95%CI = 1.51-5.60, $p = 0.001$) and hypercalciuria (OR = 2.41, 95%CI = 1.17-4.95, $p = 0.02$).

Conclusion: Higher adherence to the unhealthy and spice-caffeine dietary patterns and lower adherence to the healthy pattern is related to some urinary risk factors of nephrolithiasis

Keywords: dietary patterns; nephrolithiasis; kidney stone; hypercalciuria; hyperuricosuria; hyperoxaluria; hypocitraturia; creatinine

Comparison of Tubeless Intercostal Percutaneous Nephrolithotomy with Its Standard Method

Seyed Habibollah Mousavi-Bahar¹, Shahryar Amirhasani¹, Mehdi Shahmirzaei^{1*}

¹Urology & Nephrology Research Center, Hamadan University of Medical Sciences, Hamadan, Iran.

*Presenting Author: Mehdi Shahmirzaei

Introduction: Tubeless percutaneous nephrolithotomy (PCNL) has been found to be safe and have some advantages without increasing complications. Supracostal access may increase pulmonary complications. In this study, the outcomes of tubeless intercostal PCNL were compared with its standard method.

Methods and Materials: In this randomized clinical trial, from March 2017 to March 2019, 70 patients with kidney stones who were candidate for intercostal PCNL referring to Shahid Beheshti Hospital of Hamedan and were randomly assigned to tubeless intercostal PCNL (intervention group) and standard intercostal PCNL (Control group). Post operative observation and chest X-ray were done to detect any pleural injuries. The hemoglobin, hematocrit and creatinine changes, the average need for opiate, the average duration of hospitalization and complications according to the modified Clavien classification were evaluated and compared in two groups. Data were analyzed by SPSS software version 16 at 95% confidence level.

Results: The mean age of the patients in the intervention and control group was 46.17 and 49.66 years ($P = 0.249$), and in each group, 25 were men and 10 women ($P = 1.00$). In the intervention and control group, the mean duration of surgery time was 52.85 and 56.71 minutes, the mean duration of hospital stay was 2.2 and 2.74 days, the mean opioids use were 4.64 and 4.88 mg morphine sulphate (need for opiate 40% vs 60%), anti-febrile administration 20 and 31.4%, need for blood transfusion, 5.7% and 5.7%, and total complications including fever, hematoma, bleeding, pleural damage and hydrothorax was 28.58% and 31.43% ($P > 0.05$). Two patients in standard group and no one in tubeless group required chest tube.

Conclusion: Tubeless intercostal PCNL in comparison to its standard intercostal PCNL reduces the mean duration of operation, the hospitalization and analgesic use. However, no statistically significant difference was observed between the two methods. Complications according to the modified Clavien classification is the same in both groups.

Keywords: Kidney Stons, Percutaneous nephrolithotomy, Tubless, Standard

Efficacy of Ureteral Stent in Children with Distal Ureteral Stones Treated by Adult Type Semi-Rigid Ureteroscope

Seyed Mohammadreza Rabani^{1*}, Seyedeh Maryam Rabani²

¹Beheshti Teaching Hospital; Yasuj University of Medical sciences; Yasuj, Iran.

²Seyedeh Maryam Rabani; Cellular and Molecular Research Center; Yasuj University of Medical sciences; Yasuj, Iran.

*Presenting Author: Seyed Mohammadreza rabani

Introduction: The development of high quality, miniaturized ureteroscopes has led to the adoption of transurethral lithotripsy (TUL) as first line therapy in children, but this equipment is not available in every center. On the other hand, pre-operative ureteral stent insertion may results in passive dilatation of the ureter. To assess the impact of pre-operative stent insertion on the success rate of transurethral lithotripsy (TUL) by adult ureteroscope(8-9.8f) in children with history of failed previous attempt to access the ureteral stone, we have designed this study prospectively.

Material and Methods: 24 patients between 4 and 12 years old (mean age 10), were enrolled in this study. Mean stone size was 7mm(5-11mm). The ureteroscope was adult type (8-9.8f) Wolf Germany. Inclusion criteria were pediatric patients with distal ureteral stone and a history of failed previous attempt to access the stone by the same size ureteroscope, that underwent indwelling ureteral stent insertion for at least 3 days and exclusion criteria consisted of cases who failed to follow up.

Results: In 20 patients (83%) after removing the stent, stone access was achieved in redo operation and transurethral lithotripsy was successful, but in 4 patients ureteroscopy and stone access was impossible and again a ureteral stent was inserted for a third intervention in another center.

Conclusion: Improvement in ureteroscopic access to stones throughout the pediatric urinary tract and stone-free rates that are comparable to the adult population have led to the adoption of TUL as first line therapy in children at many urologic centers, this success is really due to high quality, miniaturized ureteroscopes, but in our country availability of these instruments is not easy for every center. So that we have to use adult type ureteroscope both for adults and children. It was well known that the ureter of a child frequently admits a 5-f ureteral catheter, but using an adult (8-9.8f) ureteroscope may be associated with a forceful ureteroscopy. Although rigid ureteroscopy can be a safe and efficient treatment for ureteral stones in every location in children, its proper size in pediatric age group is essential.

Keywords: Ureteroscopy; stent; lithotripsy; children

Retrograde Intrarenal Surgery for Management of Nephrolithiasis : Outcomes of Fellows in Training

Kaveh Mehravaran, Massoud Etemadian, Pejman Shadpour, Mayhar Fasihi *, Ahmadreza Rafati, Asghar Alizadeh, Said Pakdel , Mohamad Mehdi Atarod ,Farshad Gooran, Roozbeh Roohinezhad .

Hasheminejad Kidney Center, Iran University of Medical Sciences, Tehran, Iran.

*Presenting Author: Mayhar Fasihi

Background and Aim: To evaluate the outcome of retrograde intrarenal surgery (RIRS) in the management of renal stone less than 20 mm by fellows in training in a referral center.

Method: 100 patient were enrolled from September 2017 to April 2019 who underwent RIRS under GA or SA with holmium YAG laser for management of renal calculi less than 20 mm in after failure of other treatments like ESWL .Operation were performed by Hasheminejad Kidney Center Endourology fellows .They had no prior experience in performing RIRS. All data consisting of demographic and routine blood and urine tests were gathered and stone size before and after surgery was measured by none-contrast spiral CT scan.

Result: 100 patients were operated during 20 months of whom 72 were male and 28 were female .The mean patient's age was 42 year (10-62 yrs). Mean size of the renal stone was 15.51,mean operating time was 58 minutes (20-100 mios) and mean hospitalization time of patients was 1.12 (1-3 days). The location of stones were lower calyx in 76 cases, renal pelvis in 10 cases ,middle calyx in 9 cases ,upper calyx in 5 case. Regarding the success rate, 40 patient (%40) were stone free after the surgery,22 patient (%22) had residual stone less than 4 mm and 44 (%44) had residual fragments more than 4 mm and in 4 patient ,the stone was not found as a result of obstacle calyx. Regarding the complication, we found 3 cases of urinoma after the surgery ,of them 2 cases were managed conservatively and one case underwent open drainage,2 case of seizure ,one case of intracranial hemorrhage, 3 case of UTI and fever and 10 case needed narcotics due to postoperative pain.

Conclusion: RIRS is at the beginning of its way in Iran . The fellows had no prior experience in RIRS, Nevertheless, the outcomes of RIRS was acceptable and comparable to other currently conventional methods for treatment of small sized kidney stones. Because of short hospitalization time and lack of hemorrhage and non-invasive nature of the operation ,it seems that, it will become more popular in the future .

Keywords: RIRS; nephrolithiasis; fellow

Case Report of Endourologic Management of Basket Entrapment

Pejman Shadpour, Kaveh Mehravaran, Masoud Etemadian, Roozbeh Roohinezhad*, Farshad Gouran,
M Mehdi Atarod

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

Presenting Author: Roozbeh Roohinezhad

Background: Entrapment of a basket device on a stone occurs in approximately 0.5% of cases where a basket is used. This is attributed to grasping a stone or fragment too large for removal through the ureter, resulting in a stone entrapped by the basket or snaring of the urothelium. Two strategies have been tried for management. First is to gently advance the stone more proximally and disengage the stone. Second is to cut the basket wiring just beyond the sheath or basket disassembly if basket preservation is necessary.

Case: A 41 year old man who was referred emergently to our center. Originally he had an impacted stone resistant to SWL in the upper ureter. During ureteroscopy treatment had begun with basket insertion for lithotripsy, but the basket became entrapped proximally and ureteral injury was incurred. He was referred to our center where laser fracturing of the nitinol wires successfully disengaged and relieved the entrapment for stone clearance.

Conclusion: Entrapment of the basket device on a stone is uncommon. We used lasing two nitinol wires of the basket for management of this basket entrapment.

Keyword : Basket entrapment; Ureteroscopy; Laser lithotripsy

**Endoscopic Management for Uretero-Ileal Anastomotic Obstruction in Ileal Loop Diversion:
A Case Series**

Pejman Shadpour, Kaveh Mehravaran, Masoud Etemadian, Kiarash Attar, Roozbeh Roohinezhad*,
Farshad Gouran, Mehdi Atarod

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

Presenting Author: Roozbeh Roohinezhad

Background: Uretero-enteric stricture and stone represent uncommon but potentially complicating and difficult to treat complication of urinary diversion and may occur in 4-8% of cases. The incidence of renal stone is 3% to 4% in colon conduits and 10% to 12 % for ileal conduits. The surgical treatment of urinary diversion presents a unique challenge even in skilled hands. Percutaneous approach can prove as efficacious as open surgery but decreased morbidity of primary endoscopic management has led to increased interest in this approach.

Case Series: All four cases had undergone non continent urinary diversion for muscle invasive bladder transitional cell carcinoma and presented with loss of appetite, nausea, dull flank pain and rising creatinine. Further work up in 3 cases led to ureteral stone plus relative uretero-enteric anastomosis stricture. In the last case stricture alone had caused hydroureteronephrosis. A percutaneous approach with antegrade flexible ureteroscopy was successful in providing access to the stricture site for Ho-YAG laser lithotripsy or laser endo ureterotomy and stenting.

Conclusion: In the experienced hands, percutaneous approach can be utilized as a safe and effective method for management of stones and strictures with equal or better results than open surgery but obviously less morbidity in these difficult cases.

Keywords: Ileal loop Diversion; Laser Lithotripsy; flexible ureteroscopy; Percutaneous Access

Laparoscopic Pyeloplasty and Pyelolithotomy in a Case with History of Midline Laparotomy for Ipsilateral Bowel Cancer Surgery and Chemoradiation

Pejman Shadpour, Mohammad Mehdi Atarod, Kaveh Mehravaran, Masoud Etemadian Farshad Gouran, Roozbeh Roohinezhad*

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Roozbeh Roohinezhad

Background: Although laparoscopic pyeloplasty is standard of care for minimally invasive treatment of primary ureteropelvic junction obstruction, secondary UPJO is an entirely different matter. Laparoscopy can potentially provide lower patient morbidity, shorter hospitalization, and faster convalescence. In UPJ obstruction with stones, pyeloplasty can be performed with simultaneous stone removal.

Case: A 58 year old male with a history of chemoradiation plus right colectomy for colon cancer and a midline laparotomy scar who presented with flank pain due to a chronically impacted right renal pelvic stone leading to hydronephrosis and secondary ureteropelvic junction stricture, had been triaged for the past three years as unfit for subjecting to urologic treatments. He now had compromised renal function (GFR of 38 cc/min).

Conclusion: Transperitoneal adhesiolysis, pyelolithotomy for stone removal and laparoscopic pyeloplasty was tedious, but led to relief of symptoms and correction of elevated creatinine with no additional morbidity.

Keywords: Laparoscopic Pyeloplasty , Pyelolithotomy , Chemoradiation , Colectomy

Comparison of Ultra-rapid and Rapid Dilation Techniques for Access in Percutaneous Nephrolithotomy

Sasan Mehrabi^{1*}, Alidad Kiani¹, Behzad Mohammad Soori¹

¹Urology & nephrology research center, Hamadan University of Medical Sciences, Hamadan, Iran.

*Presenting Author: Sasan Mehrabi

Purpose: Comparison of ultra-rapid (one step amplatz insertion) and rapid dilation (two step amplatz insertion) techniques for access in percutaneous nephrolithotomy in patients referred to Beheshti's Hospital of Hamadan University of Medical Sciences between 2017-2018.

Methods: Between April 2017 and November 2018, patients who were candidates for percutaneous nephrolithotomy were enrolled in this prospective study. Patients were randomly assigned to dilation by ultra-rapid technique (group I, 25 patients) or dilation by rapid technique (group II, 25 patients). The primary endpoint of interest was access and fluoroscopy time. Secondary endpoints included success rate, decrease of Hb, hospitalization time and complications.

Results: Age, stone size, hospitalization time and success rate were not significantly different between the studied groups. The mean \pm standard deviation of access and fluoroscopy times and Hb decrease in groups I and II were 3.2 ± 0.7 min vs. 5.5 ± 1.2 min ($p < 0.05$), 11.5 ± 2.7 s vs. 21.1 ± 4.7 s ($p < 0.001$) 1.4 ± 0.5 mg/dl vs. 2.3 ± 0.9 mg/dl, respectively. Postoperative complications were not observed in both group.

Conclusion: Percutaneous tract dilation by the one-stage ultra-rapid method is safe and effective. Also, it is associated with considerably less radiation exposure in patients and surgeons.

Keywords: Ultra-rapide dilation technique; Percutaneous Nephrolithotomy

Results and Complications of Tubeless Ultra-mini PCNL in Children

Mohammad Mehdi Hosseini*, Ali Eslahi, Reza Haghpanah, Ali Mirzakhanelouei

Endourology & Stone Unit, Urology Department, Shiraz University of Medical Sciences, Shiraz, Iran.

*Presenting Author: Mohammad Mehdi Hosseini

Purpose: Percutaneous nephrolithotomy (PCNL) has rapid advancements, the newest being ultra-mini-percutaneous nephrolithotomy (UMP) which makes use of 11–13F sheaths. This miniaturization aims to reduce morbidity and improve patient outcomes. We evaluated the safety and efficacy of UMP and report our preliminary report in children.

Patients and Methods: A total of 34 children including 19 boys and 15 girls underwent UMP from March 2016 to Feb 2019. These patients had mean age of 8.6 years (1–15) and renal stone measuring between 12 and 25 mm. All patients underwent UMP using a 6F tip semi-rigid ureteroscope instead of nephroscope, and the 12F metallic sheath of the Alken telescopic dilators was used as the Amplatz sheath. Stone fragmentation was done with pneumatic lithotripter (Lithoclast). No nephrostomy was used and ureteral catheter also removed 6 to 12 hours postoperatively.

Results: Complete stone fragmentation was achieved in 29 of 34 patients (85%). The mean operative time was 55 min, and the mean postoperative hospital stay was 26.6 hrs. There were no significant postoperative complications.

Conclusion:

UMP seems to be an effective and safe procedure for managing stones. This procedure is a good alternative to SWL or RIRS for managing stones in children.

Keywords: Nephrolithiasis, Percutaneous, Ultramini

Comparison Efficacy of Peganum Harmala Seeds on Improving Pain and Passage of 6 to 10 mm Stones of Kidney and Ureter

Sadrollah Mehrabi^{1*}, Nahid Shakeri¹

¹Medicinal Plant Research Center, Yasuj University of Medical Sciences, Yasuj, Iran.

*Presenting Author: Sadrollah Mehrabi

Purpose: Considering the diuretic, analgesic and antiseptic effects of Peganum harmala, the purpose of this study was evaluating effects of harmala seeds on improving pain and expulsion rate of 6 to 10 mm stones of kidney and ureter candidate for medical therapy.

Methods: In this randomized clinical trial, 80 patients ≥ 18 years-old with kidney and ureteral stones sized 6 to 10 after taking informed consent from were randomly allocated to one of two groups by simple random sampling method. In group 1, after performing ultrasonography and confirming the presence of 6 to 10 mm stones, one capsule of tamsulosin 0.4 mg was prescribed per night for 2 weeks. In group 2, Harmala seed with dose of 20 mg/kg per day was prescribed after meal with a glass of water for two weeks. Also they were advised to do at least 30 minutes of exercise and walking. 2 weeks later patients were visited and KUB sonography was conducted and the change in size of stones and presence of residual stones was measured and recorded. The severity of pain was checked using VAS (visual analogue scale) and the data was collected and analyzed during treatment and at the end of the study. All the information were collected and analyzed by SPSS software version 21.

Results: Mean sizes of stones before treatment were respectively 13.3 ± 9.163 and 10.79 ± 7.828 millimeter ($P = 0.21$). Mean number of stones before and after treatment was 0.59 ± 1.38 and 1.18 ± 0.94 and there was no significant difference between two groups. There was no significant differences between two groups regarding average of pain score before treatment ($P = 0.065$) but pain score decreased significantly in two group that was more significant in Peganum harmala group ($P = 0.002$). Regarding efficacy of treatment, there was no significant differences between two groups but in two groups efficacy was more than 75.

Conclusion: This study showed that both Peganum harmala seed and tamsulosin without any significant side effects decreased urinary stone size and numbers without significant difference, but pain score decrease significantly by Peganum harmala.

Key words: Peganum harmala; Tamsulosin; Treatment; Urinary stones

**Renal Pelvic Trauma Management after Percutaneous Nephrolithotomy which one is Recommended:
Nephrostomy or Dabble J stent?**

Robab Maghsoudi¹, Mohammad Kolbadinezhad², Masoud Etemadian², Amir H Kashi³, Kaveh Mehravaran²,
Nasrollah Abian^{2*}, Vahid Fakhar²

¹Urology Department of Firoozgar Hospital, Iran University of Medical Sciences, Tehran, Iran.

²Hasheminejad Kidney Center, Iran University of Medical Sciences, Tehran, Iran.

³Urology and Nephrology Research Center, Shahid Behesti University of Medical Sciences, Tehran, Iran.

*Presenting Author: Nasrollah Abian

Purpose: This study was conducted to compare the insertion of double J or nephrostomy tube for management of PCNL induced renal pelvic trauma.

Methods: 58 patients who had renal pelvic trauma during PCNL, were randomly allocated in two groups for injury management. The first group was embedded with double J stent and the second group was treated by using nephrostomy tube insertion. 3 months after removal of nephrostomy or double-j stent, IVU was taken from patients. variables such as fever, urinary tract infection, urinary leakage, surgical complications (abscess, urinoma), and need for postoperative procedures were recorded to evaluate.

Results: 58 patients were enrolled in the study: 31 (54.0%) were under nephrostomy and 27 (46.0%) under Double-J stent. There was no significant difference in mean age, genders, mean of hemoglobin values, number of access, surgical duration, involved side, type of stone and place of entry between nephrostomy and double-J stent groups ($P > 0.05$). The frequency of fever and leakage didn't have statistically significant difference between two groups ($P > 0.05$). Prevalence of urinoma was 16.1% in the nephrostomy group and 40.7% in the Double-J group and there was a statistically significant difference between the two groups ($p = 0.036$).

Conclusion: Overall findings showed that although there was no significant difference between two methods of Double-J and nephrostomy in patients with PCNL, however, due to less complication of urinoma in the nephrostomy group, this method is recommended as the preferred method of treatment of renal pelvic trauma during PCNL.

Keywords: PCNL, Double-J; Nephrostomy; Pelvic trauma

Necrotizing Fasciitis after Percutaneous Nephrolithotomy: A Case Report

Robab Maghsoudi, Asaad Moradi, Behnam Shakiba, Saeed Esmaeil Soufian*

Urology Department of Firoozgar Hospital, Iran University of Medical Sciences, Tehran, Iran.

*Presenting Author: Saeed Esmaeil Soufian

Purpose: Percutaneous nephron lithotomy (PCNL) is a standard procedure for treatment of patients with large kidney stones. Although PCNL is generally considered safe, it rarely causes serious complications. We review a patient presenting with Necrotizing fasciitis following PCNL.

Case presentation: In a 65 year-old woman PCNL was performed for a single kidney staghorn stone, She didn't have any major complication intra or post operatively. She had DJ stent that removed 4 weeks after surgery in an outpatient setting. 2 weeks after Dj removal she referred to our department by chills and fever and a small perinephric collection. Also due to lower limb edema and necrotizing fasciitis, right lower limb fasciotomy was performed for her by orthopedic service in another hospital.

Aspiration of perinephric abscess and antibiotic therapy was planned for patient. After 10 days of hospital stay with antibiotic therapy and wound care she discharged from hospital. In her follow up visit after 10 days, her wound was healed and she didn't have any complain.

Conclusion: It seems that as a rare complication of PCNL, necrotizing fasciitis can be considered.

Keywords: PCNL, Complication; Necrotizing Fasciitis

Early Detection and Endoscopic Management of Post cesarean section Ureterovaginal Fistula

Seyed Mohammadreza rabani^{1*}, Seyedeh Maryam Rabani²

¹Beheshti Teaching Hospital, Yasuj University of Medical sciences, Yasuj, Iran.

²Cellular and Molecular Research Center; Yasuj University of Medical sciences, Yasuj, Iran.

*Presenting Author: Seyed Mohammadreza Rabani

Introduction: The mechanism of ureteral injury during a pelvic surgery resulting in ureterovaginal fistula (UVF) is different and includes ureteral laceration, transection, avulsion, partial or complete suture ligation, and finally, ischemia due to cautery injury. The aim of this study was to evaluate the early detection and endourological management of post cesarean section UVF.

Materials and Methods: Between February 2016 and March 2019, 8 patients were referred for vaginal leakage after cesarean section (CS), 3 of them were operated by general surgeons in emergency states. All of them were referred within 15 days from their original operations (the earliest after 6 days and the last after 15 days). 3 patients had a vague lower abdominal pain and 5 had ipsilateral flank pain, but all had per vaginal leakage. Physical examination, ultrasography, and IVP were done for confirming the diagnosis. Ureterscopy was the first attempt, using 2 or 3 guide wires for finding the more proximal part of the ureter and insertion of a JJ stent.

Results: The procedure was successful in 6 patients (75%). In two patients the guide wire could not pass, so we changed the position and ureteral reimplantation was planned. The stents were removed after 4 weeks, and after 3 months an IVP was planned that showed no evidence for ureteral stricture.

Conclusion: The only portion of the ureter that its injury may cause UVF is the distal portion, which always occurs during pelvic surgeries such as CS. The most common cause for UVF is gynecological procedures. By an attempt to control the active bleeding in deep pelvis especially in difficult CS there is a possibility to develop UVF. In a patient with total urinary incontinence after CS, physical examination, ultrasonography, and IVP with lateral view X ray may confirm the diagnosis of UVF. The traditional treatment for UVF is ureteral re-implantation, but endoscopic management may be a viable technique with less invasiveness and faster results and recovery.

Keywords: urinary; fistula; endoscopy; stent; Cesarean Section

The Safety of Continued Low Dose Aspirin Therapy During Complete Supine Percutaneous Nephrolithotomy (csPCNL)

Siavash Falahatkar, Samaneh Esmaeili, Nadia Rastjou Herfeh, Ehsan Kazemnezhad, Reza Falahatkar*, Masoumeh Yeganeh, Alireza Jafari

Urology Research Center, Razi Hospital, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.

*Presenting Author: Reza Falahatkar

Purpose: Using antiplatelet or anticoagulant in patients with cardiovascular and medical comorbidities is prevalent. Because of hyper vascular nature of kidney, physicians tend to stop using aspirin before percutaneous nephrolithotomy (PCNL). We have shown the effects of remaining on low dose aspirin in complete supine PCNL (csPCNL).

Materials and Methods: Surgical outcomes and complications of patients who were on aspirin therapy and continued it daily (group A) were compared with patients not taking aspirin (group B).

Results: Of the 643 csPCNLs, 40(6%) were performed in patients of group A and the rest of 603(94%) cases were in group B. The differences between the mean age of groups were statistically significant (60.08 ± 9.45 , group A and 48.66 ± 12.32 , group B) ($P < 0.001$). Thirty-nine (97.5%) patients in group A and 548(90.9%) group B were stone free which was not statistically significant ($P = 0.118$). The mean operative time between groups A and B (43.20 ± 21.37 and 44.83 ± 16.83 , respectively) was not considered significant ($P = 0.561$). There was also no significant difference between 2 groups in any types of complications. Multivariate analysis showed that, perioperative aspirin use was not a significant predictor of transfusion, Hb drop, operative time and other complications.

Conclusion: Remaining on aspirin does not increase the risk of bleeding, transfusion and other complications. Consequently, continuing aspirin preoperatively in csPCNL appears safe. There is no fear for continuing aspirin in csPCNL.

Keywords: Percutaneous nephrolithotomy; supine, aspirin; csPCNL; transfusion

Table 1. Multiple logistics regression

		B	S.E.	Sig.	OR	%95 C.I. for OR	
						Lower	Upper
Complication	Constant -	1.475	0.169	0.000	.229		
	Antibiotic before operation	0.903	0.199	0.000	2.466	1.669	3.643
Success rate	Constant	2.313	0.159	0.000	10.106		
	Aspirin intake	1.908	1.058	0.071	6.741	0.848	53.603
	Diabetes 0.848	0.473	0.073	2.336	0.925	5.899	
	ischemic heart disease	1.670-	0.471	0.000	.188	0.075	0.474
Transfusion	Constant -	2.471	0.245	0.000	0.085		
	Antibiotic before operation	0.999	0.278	0.000	2.716	1.576	4.681

Comparison of the Effect of Pregabalin, Solifenacin and the Administration of Combination of them on Symptoms Related to Ureteral Double-J Stent Insertion (USRS) Following Ureteroscopy and Transureteral Lithotripsy in Patients with Ureteral Stone

Siavash Falahatkar, Mohammadreza Beigzade*, Gholamreza Mokhtari, Ehsan Kazamnazhad, Samaneh Esmaeili

Urology Research Center, Razi Hospital, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.

*Presenting Author: Mohammadreza Beigzade

Purpose: The ureteral stent symptom questionnaire (USSQ) is a critical and important tool for comparing different types of stents and to evaluate the effectiveness of various drugs in resolving the USRS. In this study, we evaluated the results of drug administration of pregabalin, solifenacin, their combined use and control group through Persian translation of USSQ questionnaire.

Methods: This study was a randomized clinical trial with controlled group that was performed on 256 patients with ureteral urethra and lithotripsy transurethral candidates (TUL) referred to the Razi Hospital of Rasht for Double-J stenting.

Results: Of the 256 patients studied, 152 were male and 104 were females with a mean age of 43.52 ± 7.68 years. The mean age of males was 43.47 ± 7.75 (range 26-60) years, and in women it was 43.59 ± 7.6 (range 30-60) years. The mean age of the patients in the four groups was not significantly different. There were no significant differences between sexes in the four groups. In the pregabalin group, only the overall result of urinary symptoms was significant in the 4 weeks after operation compared to the control group. In addition, in the solifenacin group, there was a significant difference between the groups used pregabalin and compare to other groups. Compared to the control group, solifenacin and pregabalin in comparison with the control group, the rate of analgesia use, ultrasound, nocturia, dysuria during 2 weeks and 4 weeks after surgery, pain, use of pain, urinary symptoms within 2 weeks of surgery, and pain and urinary symptoms were significant for 4 weeks after surgery

Conclusion: According to the results, the combined consumption of pregabalin and solifenacin in combination with pregabalin and solifenacin on symptoms related to ureteral Double-J stent insertion (USRS) following ureteroscopy and transureteral lithotripsy in patients with ureteral stone. No adverse drug reactions were reported in either of the three drug-user groups.

Keywords: Pregabalin; solifenacin; ureteral Double-J stent insertion

Efficacy of Bimanual Abdomino-Flank Compression in Control of Postoperative Bleeding in Percutaneous Nephrolithotomy

Robab Maghsoudi¹, Masoud Etemadian², Amir H Kashi³, Nasrollah Abian², Mehran Moghimian^{1*}

¹Urology Department of Firoozgar Hospital, Iran University of Medical Sciences, Tehran, Iran.

²Hasheminejad Kidney Center, Iran University of Medical Sciences, Tehran, Iran.

³Urology and Nephrology Research Center, Shahid Behesti University of Medical Sciences, Tehran, Iran.

*Presenting Author: Mehran Moghimian

Purpose: To investigate the efficacy of postoperative bimanual abdominal-flank compression in controlling postoperative bleeding from percutaneous nephrolithotomy (PCNL).

Methods: 90 patients who underwent PCNL were randomly divided into groups of abdomino-flank compression for 0 (group A), 2 (group B), and 7 minutes (group C) after completion of tubeless PCNL. The primary endpoint of interest included the percentage drop in hemoglobin 24 and 48 hours operation. Secondary endpoint included complications. The study was approved by the ethics committee of the relevant university.

Results: 29, 30 and 29 patients were included in treatment groups of 0, 2 and 7 minutes compression groups. The stone surface area in groups A, B, and C were 376 ± 509 , 371 ± 571 , and 277 ± 160 . Hospitalization duration in groups A, B, and C were $3.13 \pm .34$, $3.29 \pm .69$, and $3.08 \pm .28$ (all $P > 0.05$). The percent drop in 24 hour postoperative Hb in groups A, B, and C were 11.5 ± 8.6 , 9.2 ± 7.3 and 9.3 ± 6.8 respectively ($P = 0.44$). The percent drop in 48 hour postoperative Hb in groups A, B, and C were 8.6 ± 8.7 , 9.5 ± 9.9 and 7.2 ± 9.6 , respectively ($P = 0.64$)

Conclusion: The results of this study reveals that postoperative bimanual compression of abdomino-flank has no substantial influence on control of postoperative bleeding after PCNL.

Keywords: bleeding; nephrolithiasis; percutaneous nephrolithotomy; hemoglobin

Comparison of the Effect of Tamsulosin, Tadalafil and Placebo in Stone Expulsion of Patients with Distal Ureteral Stones

Siavash Falahatkar, Ardalan Akhavan*, Ehsan Kazamnazhad, Samaneh Esmaeili

Urology Research Center, Razi Hospital, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.

*Presenting Author: Ardalan Akhavan

Purpose: In order to facilitate distal urethral stone passage, different drugs have been used; Tamsulosin as the most known medical exulsive therapy(MET) for stone passage has been used. the other drugs such as nifedipin and prednisolone have been studied. Tadalafil has been used in the late studies as a MET. We aim to compare the effects of tadalafil, tamsulosin and placebo as a (MET).

Method: Between September 2017 and December 2018, 142 renal colic patients with distal ureteral stone (less than 1 cm) were equally divided into three groups of tamsulosin, tadalafil and placebo. Therapy was given for a maximum of four weeks. Stone expulsion rate, stone expulsion time, analgesic use and dose, surgical treatment as long as adverse effects of drugs were noted. Data were collected and categorized then analyzed by chi-square test, one way ANOVA and LSD exam.

Results: One hundred & forty-two patients were divided into three groups. The mean age of patients was 37.08 ± 11.62 and the ratio of males/females was 1.28. Stone sizes were the same in all three groups. The stone expulsion rate was 72.7% in tamsulosin group, 63.6% in tadalafil group and 56.6% in placebo group. This difference in expulsion rate was not statistically significant. Shorter stone expulsion time and the need for lower analgesic dosage along with analgesic time use in groups were seen in tamsulosin group (72.7% vs. 63.6% vs. 56.6 %.). The occurrence of side effects was higher with tadalafil and tamsulosin than with placebo, this difference was not significant ($P = 0.002$). The occurrence of headache in Tadalafil group was significant. ($P = 0.011$)

Conclusion: Tamsulosin as a MET is effective and safe. Although tadalafil facilitates stone passage more than placebo does, regarding side effects and poor pain relief, further studies for evaluating it as a MET are recommended.

Key words: tamsulosin; tadalafil; stone expulsion; ureteral stones

Evaluation of Applicable Protocols to Radiation Dose Reduction during Percutaneous Nephrolithotomy

Hadi Radfar¹, Amir Hossein Kashi¹, Saman Farshid^{2*}

¹Urology and Nephrology Research Center, Shahid Labbafinejad Hospital, Shahid Beheshty University of Medical Sciences, Tehran, Iran.

²Department of Urology, Urmia University of Medical Sciences, Urmia, Iran.

*Presenting Author: Saman Farshid

Introduction: Despite the minimally invasive nature of percutaneous nephrolithotomy (PCNL) for the patients, there are some hazardous effects on operating room personnel. In order to avoid radiation hazard, some surgeons substitute fluoroscopy with ultrasonography that need some expertise in applying ultrasonography, but using ultrasonography makes accessibility to non-hydronephrotic kidneys harder and depends on the surgeon's skill. There are some superiority for fluoroscopy such as good localization of the opaque stones, and visualization of the needle and guide wire during the procedure, these properties make fluoroscopy more preferable than ultrasonography during PCNL. According to articles, mean fluoroscopy time during PCNL is 3-5 minutes (range from 1 to 8 minutes) and mean radiation exposure to the surgeon is 2.4 ± 1.9 mSv and about 0.28 mSv to surgeons hand, 2.4 ± 1.9 mSv. The maximum permissible eye exposure is recommended 20 mSv per year. This study was aimed to evaluate the radiation dose reduction protocols during PCNL to prevent the hazardous effect of radiation.

Materials and methods: This study was descriptive conducted on 56 patients undergone PCNL between 1 January 2018 and 1 April 2018 in Labbafinezhad hospital of Tehran, Iran by a same surgeon. The data collection form were included demographic data, surgery data such as stone size, site, location, access number, access site, fluoroscopy time, radiation dosage, operation time, stone free rate, surgery complications, and paraclinical data such as Hb (g/dl) Creatinine (mg/dl) before and after surgery. Some techniques were used to reduce the radiation dosage including measuring the size of needle distance from the skin to kidney and use of marker for accurate dilation alignment, measuring the length difference of amplatz sheath and dilator to understand the accurate length of amplatz sheath advancement from the skin, and use of single pulse per second radiation instead of continuous. Another method that helped us to reduce exposure was saving the first pyelogram view in our C-Arm and matching calyx numbers and stone location with calyces during nephroscopy that guide to find the residual stones instead of using multiple radiation. The data were analyzed using descriptive analysis and Pearson test for data with normal distribution (parametric) and spearman for data without normal distribution (nonparametric). P value less than 0.05 was reported significant.

Results: In this study, 56 patients were evaluated, mean BMI was 26, mean stone size was 2.5 ± 1 cm and 12 patients had staghorn stone, mean operation time was 63 minute, mean fluoroscopy time was 82 second, and stone free rate was 74%, mean Hb drop was 2.2 (g/dl). Of a total 56 patients, only 6 patients needed multiple accesses.

Conclusion: According to the results, applying these protocols leads to reduced radiation time and dosage during the procedure which cause less harm to operating room personnel.

Keywords: Percutaneous Nephrolithotomy; Fluoroscopy; radiation dosage; Personnel

Factors Affecting Fluoroscopic Screening Time and Radiation Dose During Percutaneous Nephrolithotomy

Siavash Falahatkar, Keivan Gholamjani Moghaddam

Urology research center, Razi hospital, school of medicine, Guilan university of medical sciences.

*Presenting Author: Hamidreza Nasseh

Introduction & Objective: In this study, the factors that affect fluoroscopic screening time (FST) and radiation dose (RD) during percutaneous nephrolithotomy (PCNL) were determined.

Methods: From December 2010 to July 2012, 161 patients with upper urinary tract stones who underwent PCNL under general anesthesia and fluoroscopic guidance were included in study. Factors including previous stone surgery, previous extracorporeal shockwave lithotripsy (ESWL), stone burden, stone opacity, multiplicity of stone, stone location, staghorn stone, complex stones, hydronephrosis, kidney side, calyx for access and stone-free result, body mass index (BMI) were analyzed by univariate and multivariate tests.

Results: The mean patient's age and BMI were 46.18 ± 12.13 years and 28.29 ± 5.56 kg/m². The mean stone burden was 34.95 ± 13.23 millimeters. The mean FST and RD were 106.36 ± 57.19 seconds and 475.54 ± 528.66 CGY respectively. In univariate analysis FST and RD were significantly increased with BMI ($P < 0.05$). The mean FST was 143.00 ± 29.48 and 104.69 ± 57.64 seconds in supracostal and subcostal groups respectively ($P = 0.083$). In multiple tract access (165.14 ± 70.02 seconds), the mean FST was significantly ($P = 0.005$) longer than single tract access (103.69 ± 55.34 seconds). The mean RD was 455.43 ± 486.08 CGY in single tract group and 1038 ± 1200.12 CGY in multiple tracts group ($P = 0.069$). In multivariate analysis, BMI ($P = 0.027$), supracostal access ($P = 0.019$) and number of tract ($P = 0.002$) were effective factors of FST. The FST was increased 1.77 seconds with one unit increase in BMI. Multiple tracts access were 65.484 seconds longer than single tract access. The only effective factors of RD was supracostal access ($P = 0.031$)

Conclusion: BMI, supracostal access and number of tract were factors that affected FST. Supracostal access was the factor that affected RD during percutaneous nephrolithotomy

Keywords: percutaneous nephrolithotomy; radiation dose; fluoroscopic screening time

Pneumatic Lithotripsy Versus Laser Lithotripsy for Ureteral Stones

Amir Reza Abedi¹, Mohammad Reza Razzaghi¹, Farzad Allameh¹, Fereshte Aliakbari², Morteza FallahKarkan^{3*},
Arash Ranjbar³

¹Laser Application in Medical Science Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

²Infertility & Reproductive Health Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

³Shohada-e-Tajrish Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

*Presenting Author: Morteza FallahKarkan

Purpose: Several different modalities are available for ureteral stone fragmentation. From them pneumatic and holmium: yttrium-aluminum-garnet (Ho: YAG) lithotripsy have supportive outcomes. In this study we studied 250 subjects who had ureteroscopic pneumatic lithotripsy (PL) or laser lithotripsy (LL).

Methods: Two-hundred & fifty patients with ureteral stones underwent ureteroscopic lithotripsy (115 subjects in the PL group, 135 subjects in the LL group) from August 2010 to April 2016. The purpose of this investigation was to evaluate stone-free rate (SFR), mean operation time (MOT), mean hospital stay (MHS), stone migration and complications.

Results: Two groups were similar in age, gender, mean size of stones, side of stone, and complications. There was a statistical difference in terms of SFR, stone migration and MHS in favor of the LL group ($P \leq 0.05$, $P \leq 0.05$ respectively), and MOT in favor of the PL group ($P \leq 0.05$).

Conclusion: Both the PL and LL techniques were effective and safe for ureteral stones, however a slightly higher SFR was found in the LL group.

Keywords: Pneumatic lithotripsy; Laser lithotripsy; Ureteral stone; Ho: YAG laser

Incidence and Underlying Factors for Occurrence of New Post-Intervention New Contralateral Reflux in Patients Undergoing Unilateral Antireflux Surgery

Pejman Shadpour, Maryam Emami, Nasrollah Abian*, Delaram Beirami

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Nasrollah Abian

Purpose: Post-intervention contralateral reflux refers to the occurrence or increase in grade of reflux in the contralateral ureter following treatment for unilateral urinary reflux. In this study, we evaluated its incidence and related factors.

Method: Preoperative reflux grade was determined by VCUG or RNC and kidney function by DMSA. According to VCUG, the reflux units were divided into four groups: normal (no reflux), high (grade 4 and 5 equivalent), medium (grade 3) and low (grade 2 and 1). Patients were evaluated by cystography 2 to 3 months after surgery. In this case series study, patients with post-intervention reflux were assessed in terms of gender, type of intervention, presence of bladder dysfunction, reflux grade, DMSA, fever during admission, need for readmission due to UTI, and the need for re-intervention.

Results: Of 442 patients undergoing endoscopic or open reflux surgery between 1391 and 1395 at our referral center 150 had unilateral reflux. Six patients (4%) displayed post-intervention contralateral reflux. All patients were female. Five patients had undergone endoscopic treatment. Four patients had bowel bladder dysfunction. The primary grade of reflux was moderate to severe in all patients. Only in one patient DMSA showed significant difference between the two kidneys. None of the patients developed immediate post op fever. However, two required readmission for febrile UTI. Two underwent re-intervention (one open, the other endoscopic).

Conclusion: The incidence of post-intervention contralateral reflux was 4%. There seemed to be a high association between post-intervention reflux and BBD, which emphasizes the importance of attention to bladder and bowel dysfunction in VUR patients. Also, all cases were high grade primarily. With exception of two patients who were re-treated, all other cases had no problem in follow-up and did not require re-intervention.

Keywords: Vesicoureteral reflux; Anti-reflux surgery; Post-intervention contralateral reflux

Our Novel Scoring system for Triage in Management of Intrarenal Vascular Complications of Percutaneous Nephrolithotomy: Presenting the POPVESL Score

Pejman Shadpour, Robab Maghsoudi, Masoud Etemadian, Nasser Yousefzadeh*, Nasrollah Abian

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Nasser Yousefzadeh

Purpose: Percutaneous nephrolithotomy (PCNL) is the less invasive modality of choice for large renal stones. Delayed bleeding usually points to the likelihood of pseudoaneurysm (PA) or arteriovenous fistula (AVF), which may require expensive and non-uniformly accessible angioembolization. We have analyzed the large-volume experience accumulated at our high volume center to detect critical predictors of success with conservative management.

Method: We reviewed the data of all patients who were re-admitted for gross hematuria after undergoing PCNL at our center between Dec 2011 and Jan 2016. All stable patients diagnosed with intra-renal vascular lesions had a period of watchful conservative management. Patients requiring repeated transfusion beyond initial stabilization were generally scheduled for elective angioembolization. Perioperative findings, factors related to the stone, and management details were subjected to multifactorial analysis. Thresholds were calculated for the most critical variables through ROC curve analysis.

Results: Of the 4403 PCNLs performed over four years, 83 (1.9%) patients with delayed bleeding were diagnosed to have an intrarenal vascular lesion. Of these, 54 were arteriovenous fistulas (AVF, 65%) and 29 pseudoaneurysms (PA, 35%). Overall 49 (59%) responded to conservative treatment and 34 (41%) eventually required angioembolization. In multivariable analysis, predictive factors for poor response to conservative treatment were requiring transfusion beyond initial stabilization, pseudoaneurysm, history of open renal surgery, longer PCNL-to-second-admission interval, and size of the vascular lesion. Our proposed POPVESL score (short for Post PNL Vascular Embolization selection) when below 11, correctly predicts those who shall not need vascular intervention (positive predictive value=1 and negative predictive value=0.75).

Conclusion: These findings including the proposed POPVESL score have potential for clinical application and enhancing practical guidelines on the management of post-PCNL bleeding.

Keywords: Percutaneous nephrolithotomy; Arteriovenous fistula; Pseudoaneurysm; Angioembolization

Prospective Trial Comparing Fluoroscopic Guidance and Combined Fluoroscopic and Ultrasonographic Guidance in Percutaneous Nephrolithotomy in Term of Safety, Efficacy, Perioperative Facors and Total X-ray Dosage

Seyed Hossein Hosseini Sharifi¹, Ali Tabibi¹, Vahid Najjaran Tousi^{1*}, Flora Khaledi¹, Parham Rabiee², Abbas Basiri¹

¹Urology Department, Erfan private hospital, Tehran, Iran.

²Radiology department, Shahid Rajayi Heart center,IUMS, Tehran,Iran.

*Presenting author: Vahid Najjaran Tousi

Purpose: To compare fluoroscopic guidance vs combined ultrasonographic and fluoroscopic guidance for percutaneous renal access in standard percutaneous Nephrolithotomy (PCNL) in term of safety, efficacy, total x-ray dose and perioperative factors

Materials and methods: This study was conducted from February 2016 to July 2018 as a randomized clinical trial in Erfan hospital. One hundred and fourteen consecutive patients with renal stone, candidate for PCNL were randomly assigned to two equal groups. In group- 1 renal access was achieved using fluoroscopic guidance and in group-2 access was achieved using both ultrasonography and fluoroscopy. Ultrasonography was used to enter the desired calyx and to introduce J-tip guide wire. The rest of procedure; dilatation of the tract and access creation was done using x-ray. We used one shot dilation by Amplatz dilator in all cases. All procedures were performed by one surgeon in prone position and under general anesthesia.

Results: The two groups were matched by mean age, distribution of stone location, and stone burden. Mean operative time, hospital stay, stone-free rate, requirement for additional tracts and mean hemoglobin drop were comparable between the two groups. There was no visceral injury in two groups. In three cases of combined imaging group, getting access by ultrasonography was not successful (4.2%). Radiation dose was significantly lower in group-2. (Mean radiation dose in group-1 and group-2 was 3.65 and 1.58 mGy respectively. (Pvalue <0.005)

Conclusion: To reduce the radiation dose to surgical team and to patient in addition to high success rate for finding the best targeted posterior calyx without sacrificing results of surgery, by using this step-by step technique and getting access and introducing guide wire using ultrasonography and dilator advancing using x-ray is highly recommended.

Keywords: Percutaneous Nephrolithotomy; Imaging

Determining the Impact of Preoperative ASA score on PCNL Results

Sepehr Hamedanchi^{1*}, Shahryar Sane², Melina Eqbal³

¹Endourologist, assistant professor of urology, Imam medical center, Urmia university of medical sciences, Urmia, Iran.

²Associate professor of anesthesiology, Imam medical center, Urmia university of medical sciences, Urmia, Iran.

³Urology resident, Imam medical center, Urmia university of medical sciences, Urmia, Iran.

*Presenting Author: Sepehr Hamedanchi

Purpose: To determine the role of ASA classification in results of PCNL patients under spinal anesthesia.

Methods: In this randomized clinical trial, 286 patients were enrolled. Patients were classified in preoperative phase in clinic to three classes of ASA I, II, and III by expert anesthesiologist. All patients underwent PCNL with spinal anesthesia in prone position. Blood transfusion, bleeding, hospital stay, urine leak, adjacent organs injury, fever, number of accesses, retained stones, and duration of operation were recorded.

Results: Seven cases required blood transfusion among them five subjects were in ASA I and 2 patients were in ASA II class with significant difference ($P > 0.05$). The preoperative hemoglobin was comparable across ASA groups but after operation it was differed across the groups ($P = 0.080$). Also the mean hemoglobin alteration was similar across the ASA classes ($P > 0.05$). There were nine retained stones after PCNL including six and three cases in those with ASA II and III, respectively without significant difference ($P > 0.05$). The mean duration of procedure and mean hospital stay were alike across the groups ($P > 0.05$).

Conclusion: Complications and outcomes during and after PCNL are same across ASA groups and PCNL may be used safely in high-risk patients.

Keywords: Urolithiasis; PCNL; ASA; Nephrolithotomy

Efficacy of Nigella sativa seeds and tamsulosin on improving pain and passage of 4 to 10 mm Stones of kidney and ureter

Sadrollah Mehrabi^{1*}, Nahid Shakeri¹

Medicinal Plant Research Center, Yasuj University of Medical Sciences, Yasuj, Iran.

*Presenting Author: Sadrollah Mehrabi

Purpose: Aim of this study was comparing efficacy of Nigella sativa seeds and tamsulosin on pain improvement and expulsion of renal and ureteral stones of less than 10 millimeter.

Methods: In this randomized clinical trial, 80 patients older than 18 years old with kidney and ureteral stones sized 4 to 10 millimeters after taking history and complete physical exam and informed consent form, were randomly allocated to one of two groups by simple sampling method. In group 1, after performing ultrasonography and confirming the presence of 4 to 10 mm stone one capsule of tamsulosin 0.4 mg was prescribed per night for 2 weeks.

In group 2, Nigella sativa seeds with dose of 2gr per day, divided in 2 capsules every 12 hr were prescribed after meal with one glass of water for two weeks. Two weeks later patients were visited and KUB sonography was conducted and the change in size of stones and presence of residual stones was measured and recorded. The severity of pain was checked using VAS (visual analogue scale) by the patient and the data was collected and analyzed during treatment and at the end of the study.

Results: Mean sizes of stones before treatment were 1.81 ± 10.03 and 9.41 ± 1.68 millimeter, respectively ($P=0.06$). Mean size of stones after treatment were 4.33 ± 4.97 and 5.21 ± 3.63 millimeter respectively. Mean number of stones after treatment was 0.83 ± 0.59 and 1.18 ± 0.94 and there was no significant differences between two groups ($P = 0.52$). There was no significant differences between two groups regarding average of pain score before treatment ($P = 0.05$), but pain score decreased significantly in two group that was more significant in Nigella sativa group ($P = 0.015$). Regarding efficacy of treatment in two groups it was more than 65 % ($p = 0.065$).

Conclusion: This study showed that both Nigella sativa seed and tamsulosin decrease urinary stone size and numbers and pain intensity during passage of stones without significant difference. It seems that Nigella seeds reduce pain and size of urinary stones and can be used as an alternative treatment in urinary stones.

Keywords: urinary stone; nigella sativa; tamsulosin; treatment

Challenges in Laparoscopic Pyeloplasty of Ureteropelvic Junction Obstruction in Intrarenal Renal Pelvis

Amir-Hossein Kash¹, Iman Ghanaat^{1*}, Saman Farshid²

¹Urology and Nephrology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

²Nephrology and Kidney Transplant Research Center, Urmia University of Medical Sciences, Urmia, Iran.

*Presenting author: Iman Ghanaat

Introduction: Pyeloplasty for treatment of ureteropelvic junction obstruction (UPJO) in cases of intrarenal renal pelvis is difficult and challenging. In this condition ureterocalicostomy is one of the options. We did this surgery with laparoscopic method to understand feasibility and complications.

Material and method: In August 2019, a 33 year-old female with left flank pain and UPJO documented in imaging and nuclear scan with intrarenal renal pelvis in left kidney underwent laparoscopic ureterocalicostomy and middle pole stone extraction.

Result: Laparoscopic ureterocalicostomy with double J (DJ) insertion was done in transperitoneal method after colon medialization and ligation of renal pelvis and middle pole renal stone extraction without any intra or postoperative complication and in follow up renal pelvis urine drainage and flank pain were corrected after DJ extraction.

Conclusion: Laparoscopic ureterocalicostomy and renal stone extraction is a good treatment option in the case of UPJO in intrarenal renal pelvis with simultaneous renal stone simultaneously.

Keywords: Laparoscopy; ureteropelvic junction obstruction; pyeloplasty; ureterocalicostomy; renal stone

The Necessity of Ureterolysis During Laparoscopic Excision of Deep Infiltrating Endometriosis Lesions

Roya Padmehr*, Khadijeh Shadjoo, Atefeh Googin, Abolfaz Ghodgani

Research Institute, Acecr, Reproductive Immunology Research Center, Tehran, Iran.

*Presenting Author: Roya Padmehr

Introduction and Objective: Surgical interventions aim to remove visible areas of endometriosis and restore the anatomy. Comparing with incomplete excision, the complete excision of deep infiltrative endometriosis has been shown to significantly decrease post-operative pain, recurrence rate and also postoperative complications. We aimed to demonstrate the frequency of ureterolysis in deep endometriosis laparoscopic surgeries in order to do complete excision of deep endometriosis lesions and to reduce damage to ureters during these difficult surgeries.

Methods: 201 patients with main chief complaint of dysmenorrhea and dyspareunia (measured by verbal analog scale) were referred to our center for laparoscopic surgery. We defined expected difficulty of the surgery and also difficulty and complication score of the surgery which were scored for each patient (0=the least difficulty or complications and 10=the greatest difficulty or complications). We used a logistic regression model to analyze the correlation between doing ureterolysis with the scores of dysmenorrhea, dyspareunia, expected difficulty, difficulty and complications of the surgery. Mann-Whitney and independent t test were also used for evaluating relation of doing ureterolysis with dysmenorrhea, dyspareunia and expected difficulty scores.

Results: Mean age of patients was 31.17 years (SE = 0.416). Mean dysmenorrhea score in non ureterolysis and ureterolysis groups were 3.97 ± 0.657 and 6.92 ± 0.236 respectively. Also mean dyspareunia score for non ureterolysis and ureterolysis groups were 1.91 ± 2.87 and 2.47 ± 3.16 respectively. The overall percentage of our logistic regression model was 90%. There was a significant correlation between doing ureterolysis and difficulty score of surgery ($b = 0.698, p = 0.007$) and complication score ($\beta = 0.896, p = 0.021$). There was significant relationship between ureterolysis and dysmenorrhea score ($p = 0.000$), Ureterolysis and dyspareunia score was not significantly related ($p = 0.348$) (independent t test $p = 0.312$). Only 61 patients had expected difficulty score. Mean expected difficulty for non ureterolysis and for ureterolysis group was (6.29 ± 0.993) and (8.17 ± 0.274), respectively. There was significant relationship between doing ureterolysis and expected difficulty score ($p = 0.02$)

Conclusion: Ureterolysis in endometriosis laparoscopic surgeries significantly can increase difficulty of our surgeries, however, it can significantly decrease postoperative complications.

Key words: Endometriosis; Deep Infiltrating Endometriosis; Ureterolysis; Recurrence; Pelvic Pain

Comparative study of Nitroglycerin and Magnesium Sulfate Effect on Endoscopic Surgical Outcome of Ureteral Stones

Salman Soltani^{1*}, Mahmoud Tavakkoli¹

¹Kidney Transplantation and Complications Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.

*Presenting Author: Salman Soltani

Introduction: Endoscopic surgery is a popular treatment of ureteral stones. The surgeons encounter two problem in endoscopic treatment. The first problem is the inability to reach to the stone and the second is ureteral damage because of ureteral stenosis or ureteral kink. Our purpose was to decrease these two complications by using nitroglycerin and magnesium sulfate dilating property.

Methods & Materials: The present clinical trial study evaluated the efficacy of nitroglycerin and magnesium sulfate on endoscopic ureteral stone surgery. In this study, patients were divided into three groups of 40 (Nitroglycerin, MgSO₄ and control) and evaluated based on inclusion criteria and written consent. After examining the patient's condition and controlling his vital signs by anesthesiologist, the patient was placed in one of three groups: control groups, serum nitroglycerin or magnesium sulfate group. The anesthesiologist was aware of the group assignment, but the surgeon, patient, and analyzer were blind to the grouping. After surgery, duration of operation and success rate of surgery were included in the checklist. Also two weeks after, when the patient was referred for stent removal, checklist was completed for complications and final information. Finally, data were analyzed in SPSS ver 22 software.

Results: The mean duration of surgery in the present study was significantly higher in the control group than the two groups receiving nitroglycerin and magnesium ($P < 0.001$). However, there was no significant difference between the groups receiving magnesium sulfate and nitroglycerin ($P = 0.708$). There was no significant difference in postoperative infection between all three groups ($p = 0.812$). In terms of stone accessibility, the lowest level of stone access was in the control group (59.1%). But there was no significant relationship between the rate of stone accessibility in the two intervention groups. Meanwhile, there was a significant difference between the control group and the intervention group regarding stone accessibility. There was no significant difference between the case groups in terms of complete stone clearance parameter. Although there was a significant difference between the control group and the two drug recipient groups ($p = 0.004$).

Conclusion: In general, nitroglycerin and magnesium sulfate were significantly better than control group in terms of duration of surgery and success rate. However, there was no significant functional difference between the two drugs.

Keywords: endoscopic Ureteral Surgery; Nitroglycerin; Magnesium Sulfate

Laparoscopic Adrenal Sparing Surgery in Management of Adrenal Tumors

Nasser Simforoosh, Seyed Arsalan Aslani*, Mehdi Dadpour

Labafinejad Hospital, shahid beheshti university medical science.

*Presenting Author: Seyed Arsalan Aslani

Introduction and Objective: Laparoscopic adrenalectomy is the standard of care for adrenal tumors from incidentaloma to cancer. Partial adrenalectomy is considered recently to preserve adrenal function. We evaluated the feasibility and outcomes of adrenal sparing technique in managing adrenal tumors in a single surgeon series. In this video, we present 3 cases of Conn's adenoma, Cushing adenoma and bilateral pheochromocytoma.

Materials and Methods: Between 1997 to 2018 a total number of 284 patients underwent clipless laparoscopic adrenalectomy. Adrenal sparing technique was done in 48 of them (partial adrenalectomy or adenomectomy). After mobilization of colon, adrenal gland was dissected free from neighboring organs. Adrenal tumor was exposed and enucleated in Conn's adenoma and tumorectomy was done in the other cases (partial adrenalectomy). All patients were followed by lab data, imaging and clinical outcome.

Results: The mean age was 39.6 years (6 months to 83 years). Mean tumor size was 5.1cm (range 1 to 18 cm). Tumor pathologies were 12 cases of pheochromocytoma, 7 cases of conn's adenoma, 3 cases of cushing adenoma, 3 cases of myelolipoma, 1 case of hydatid cyst, 16 cases of simple cyst and 6 cases of incidental adenoma. The number of 14 patients of total adrenalectomy group and 3 patients of adrenal sparing group underwent bilateral surgery. No Clavien grade 3,4 or 5 or any major complication because of surgery occurred. Hematocrit change and hospital stay were similar in these 48 cases and other patients. In the follow up period, imaging and hormonal test were normal for all patients and sign and symptoms such as blood pressure became normal post operatively.

Conclusion: laparoscopic adrenal sparing technique for adrenal tumors is safe and feasible and preserves adrenal function and the patients does not require receiving long term steroid supplement.

Keywords: laparoscopy; adrenal; adrenalectomy

Investigating ESWL Success Rate in the Treatment of Renal and Ureteral Stones in Children

Mohammad Javad Soleimani¹, Hossein shahrokh², Vahid Vahedi Soraki^{3*}, Vahid Fakhar⁴

Hasheminejad kidney center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Vahid Vahedi Soraki

Introduction: Extracorporeal shock wave lithotripsy (ESWL) is one of the methods of treatment of stone in children. This study was conducted to determine success rate of ESWL in treatment of kidney and ureteral stones in children referred to Hasheminejad kidney center during second half of 2018.

Methods: This observational prospective cohort study was conducted on 144 children referred to Hasheminejad kidney center during second half of 2018. The subjects were selected using convenience sampling method. The present study investigated the success rate of ESWL in treatment of kidney and ureteral stones and effective factors in this regard.

Results: A total of 133 patients (92.4%) had stone passage. A total of 37.5% of patients had residual stones, 28.5% of which were less than 5 mm in diameter. Successful results were seen in 131 cases (91%). Successful results were significantly higher in males ($P = 0.011$) and lower in simultaneous stones in middle calyx and lower calyx ($P = 0.0001$).

Conclusion: According to the results, it can be inferred that ESWL success rate was above 90% in treatment of kidney and ureteral stones in children in such way that with an ESWL session in patients who have been properly selected for this procedure. The present study identifies gender and stone locations as the factors contributing to the successful lithotripsy and identifies female gender and presence of the stone in lower and middle calyx as a risk factor for the lower lithotripsy success rate.

Keywords: ESWL, SFR; Urinary stones; Children

Laparoscopic Pyelolithotomy for Management of Renal Stones: 15 Years of Experience in a Pioneering Referral Center

Amir H Kashi, Akbar Nouralizadeh, Arsalan Aslani, Milad Bonakdar Hashemmi, Nasser Simforoosh, Abbas Basiri, Seyed Amir Mohsen Ziaee, Ali Tabibi, Mohammad Hadi Radfar, Mohammad Hossein Soltani, Reza Valipour

Shahid Labbafinejad Medical Center; Urology and Nephrology Research Center; Shahid Beheshti University of Medical Sciences (SBMU); Tehran; Iran.

*Presenting author: Arsalan Aslani

Purpose: To report the outcomes of laparoscopic pyelolithotomy for management of large kidney stones during 15 years in a pioneering referral center.

Methods: Patients with large stones who underwent laparoscopic pyelolithotomy were enrolled during 2005 to 2018 retrospectively. Medical records of patients were used to extract preoperative, operative and early postoperative data.

Results: 310 patients were included during 2002 to 2017. The average yearly number of pyelolithotomies performed in the first 10 years was 15 which increased to an average of 50 during the next 5 years. The length of operation duration was 172 minutes on average during the first 10 years which decreased to 121 minutes during the last 5 years. Stone free rate was 85% during the first 10 years which increased to 91% during the last 5 years.

Conclusion: Our longterm experience with laparoscopic pyelolithotomy for management of renal stones in patients with solitary stones or limited stones within kidney with hydronephrosis reveals that laparoscopic pyelolithotomy is a feasible option in centers with laparoscopic expertise and experience in performing laparoscopic pyelolithotomy and the performance matures with continual practice.

Keywords: laparoscopy; pyelolithotomy; nephrolithiasis

Head to Head Comparison of Clinical and Radiological Success Rate of Endoscopic vs Open Anti-reflux Surgery

Pejman Shadpour, Nasrollah Abian*, Maryam Emami, Delaram Beirami

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Nasrollah Abian

Purpose: Comparing the results of endoscopic urinary reflux treatment against open surgery and the concepts of clinical vs radiological success, and factors associated with them.

Method: 442 patients (732 units) with urinary reflux treated by either of two surgical procedures (endoscopic or open) were reviewed. Reflux grade was determined by VCUG or RNC and kidney function by DMSA. Postoperative success was assessed from three aspects: Clinical success (no febrile UTI in follow up), relative radiologic improvement (downgraded postop) and absolute radiological success (no reflux on postoperative imaging). Patients were compared for success by surgical method, sex, grade, scarring, bladder bowel dysfunction (enuresis / constipation), and early or late febrile UTI.

Results: Between 1391-95(2012-2016), 220 patients had endoscopic surgery and 222 underwent open procedures at our referral center. Total clinical success rate was 91.2%, relative radiological success was 98.6% and absolute radiological success 82.5%. All three types of success were significantly higher with open surgery than endoscopic surgery ($P < 0.001$). Clinical success did not require absolute radiological success ($\text{kappa} = 0.45$), Although absolute radiological success was correlated with clinical success, 73 patients with perfect clinical success had not achieved absolute radiological success. Most significant factors contributing to success of treatment were: Grade (the higher the grade the less success in all three forms); and presence of both constipation and enuresis, correlated with significant decrease in clinical success ($P < 0.001$).

Conclusion: The results of open reflux surgery are better than endoscopic in both clinical and radiological terms. Clinical success after treatment does not necessarily require absolute radiologic success although absolute radiological success is associated with clinical success. Higher grade negatively impacts all types of success while BBD only affects clinical success.

Keywords: Vesicoureteral reflux, Endoscopic anti-reflux surgery, Clinical success, Radiological success

Re-Operation after Endoscopic or Open Antireflux Surgery, Can it be Foreseen?

Pejman Shadpour, Nasrollah Abian*, Maryam Emami, Delaram Beirami

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Nasrollah Abian

Purpose: Study of the need for urinary reflux reoperation (endoscopic or open) following primary intervention by endoscopic or open methods and its associated factors

Method: Patients with history of primary endoscopic or open reflux surgery at our center were reviewed. Preoperative reflux grade was determined by VCUG or RNC and kidney parenchyma was evaluated by DMSA. Cases of clinical failure (recurrent febrile UTI after discharge with unresolved reflux at follow-up cystography or presence of reflux in follow-up with positive urine culture and progressive scarring) had endoscopic or open re-intervention depending on surgeon's preference, clinical presentation and radiologic findings). Reoperation and its associated factors were evaluated. The studied variables were age, sex, bladder and bowel dysfunction, reflux grade, DMSA and fever during hospitalization.

Results: 442 patients with 732 reflux units underwent endoscopic (220) or open surgery (222) between 1391 and 1395. Of these 31 patients (7%) required re-intervention 26 cases (11.8%) for endoscopic, and 5 (2.2%) for open surgery. No patient with primarily low grade reflux needed reoperation. Among other variables, early post-operative fever was associated with the need for re-operation ($P = 0.03$). Other variables were not associated with the need for repeated surgery.

Conclusion: Post-operative fever is associated with the need for re-operation following urinary reflux intervention, and the surgeon may consider this fact for following such patients closely after reflux surgery.

Keywords: Vesicoureteral reflux; Reoperation; Open anti-reflux surgery; Endoscopic anti-reflux surgery

Clinical Outcomes of Simultaneous Bilateral Percutaneous Nephrolithotomy (PCNL) in Patients with Kidney Stones: A Prospective Cohort Study

Mohammad Reza Darabi¹, Salman Soltani^{1*}, Alireza Akhavan Rezayat¹, Mahmoud Tavakkoli¹

¹Kidney Transplantation and Complications Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.

*Presenting Author: Salman Soltani

Introduction: Urinary tract stones are one of the most frequent medical emergencies which lead to life-threatening complications, namely obstructive uropathy as well as renal failure in some situations. Previously, bilateral stones were treated with either open surgery or percutaneous nephrolithotomy (PCNL). However, these treatment options were associated with lengthy operation time, need for more anesthesia, further bleeding, and long hospitalization. Therefore, much effort has been made to treat both sides simultaneously.

Materials and Methods: In this prospective cohort study, 39 adult patients with bilateral renal stones were randomly recruited at Imam Reza hospital in Mashhad, Iran between January 2016 and January 2017. Adult patients with bilateral renal stones were included in this study. Exclusion criteria were as follows: Patients with severe heart or lung disease, patients with coagulation disorders, pregnant women, and cases with any contraindications for general anesthesia. After insertion of bilateral ureteral catheters, all patients underwent simultaneous bilateral PCNL in prone position. Transureteral lithotripsy was performed for patients with ureteral stones. The surgery was initially carried out on the symptomatic side and then iterated on the remaining kidney. Major complications including bleeding, fever, pain, urine leakage, and residual stones were recorded. SPSS software was used for data analysis. Data were expressed as percentage and mean \pm SD. P value less than 0.05 was considered significant.

Results: A total of 39 patients (27 males with mean age of 37.6 years and 12 females with mean age of 45.7 years) were studied. As many as 15 (38%) patients received a unilateral nephrostomy. Three underwent totally tubeless surgery. Bleeding (41.0%) was the most common complication, followed by residual stones (20.5%) and fever (20.5%), urine leakage (15.3%), pain (12.8%), blood transfusion (2.5%) and colon perforation (2.5%).

Conclusion: It was concluded that simultaneous bilateral PCNL is not associated with higher morbidity than the unilateral method.

Keywords: Bilateral calculi; Complications; Percutaneous nephrolithotomy; PCNL; Renal stones

**Laparoscopic Donor Nephrectomy Is a Safe Surgical Approach in Healthy Obese Kidney Donors;
Ten-Year Single-Center Experience, Retrospective Study**

Nasser Simforoosh, Mohsen Variani, Seyed Arsalan Aslani*

*Lanafinejed Hospital, Shahid Beheshti University Medical Science.

*Presenting Author: Seyed Arsalan Aslani

Background and Objectives: Lack of donors is always a great problem. Kidney donor with a body mass index (BMI) $\geq 30\text{kg/m}^2$ are not suitable for laparoscopic donor nephrectomy, however, some studies have suggested that obese donor could be an appropriate donor with similar surgical outcomes. Therefore, we report the results of our 10-year experience of laparoscopic donor nephrectomy (LDN), examining the effect of BMI on the surgical results of LDN.

Materials and Methods: We retrospectively reviewed medical records of people who underwent LDN at the urology ureter of Shahid Beheshti University of medical science, Tehran, Iran. from 2005 to 2015. The collected information included pre- and post-operative serum levels of hemoglobin and creatinine and we also investigated the surgical outcomes (operation time, cold and warm ischemia, need for blood transfusion, and conversion to open surgery, length of hospital stay and complications rates) with respect to BMI categories (≤ 24.9 , 25-29.9, and $\geq 30\text{kg/m}^2$).

Results: Out of 1083 Kidney donors, 732 donors had BMI $\leq 24.9\text{ kg/m}^2$, 256 donors had BMI within 25-29.9, and 95 donors had BMI $\geq 30\text{ kg/m}^2$. There was no significant difference among the groups in terms of operation time ($P = 0.558$), warm or cold ischemic time ($P = 0.829$ and 0.951 , respectively), blood transfusion ($P = 0.873$) and length of stay ($P = 0.850$).

Conclusion: Laparoscopic approach for donor nephrectomy is identified as a safe and effective method in obese donor without significant postoperative complications.

Keywords: kidney donor laparoscopy; Obese

Evaluation and Comparison of Metabolic Disorders between Patients with Unilateral and Bilateral Staghorn Renal Stones

Mehrdad Mohammadi Sichani*, Amir Jafarpisheh, Alireza Ghoreifi

Isfahan Kidney transplantation research center. Department of Urolog, Alzahra research center, Isfahan university of medical sciences, Isfahan/Iran.

*Presenting Author: Mehrdad Mohammadi Sichani

Purpose: Metabolic disorders are common in patients with staghorn renal stones. Aim of this study was to evaluate and compare the metabolic disorders in patients with unilateral and bilateral staghorn stones.

Materials and Methods: In this cross sectional study, 78 patients who underwent percutaneous nephrolithotomy (PCNL) for staghorn renal stones were included. The urine volume, the level of calcium, oxalate, uric acid, phosphate, sodium, citrate, creatinine, and cystine from 24 hour urine collection as well as the serum levels of calcium, phosphorus, magnesium, creatinine, blood urea nitrogen (BUN), parathyroid hormone (PTH) and uric acid were recorded and compared among the two groups with unilateral and bilateral renal stones.

Results: 56 patients (71.8%) had unilateral and 22 (28.2%) had bilateral renal stones. At least one abnormal metabolic factor was found in 32 (57.1%) and 15 (68.2%) patients with unilateral and bilateral renal stones, respectively ($P = .044$). Cystine urine levels and serum levels of BUN were higher in cases with bilateral compared to unilateral renal stones (36.4% vs. 12.5%, $P = .025$ and 27.3% vs. 1.8%, $P = .002$, respectively).

Conclusion: Metabolic factors are strongly correlated with the formation of staghorn renal stones specially bilateral ones. In our study among different metabolic factors, cystine urine levels and serum levels of BUN were significantly higher in patients with bilateral renal stones. Proper metabolic assessments are recommended in patients with staghorn urolithiasis.

Keywords: metabolic diseases; risk factors; staghorn calculi

Functional Results and Recurrence After Laparoscopic Partial Adrenalectomy Versus Total Adrenalectomy

Nasser Simforoosh, Mohammad Hossein Soltani, Hamid-Reza Shemshaki, Milad Bonakdar Hashemi*,
Mehdi Dadpour

Urology/Nephrology Research Center, Shahid Labbafinejad Medical Center, Shahid Beheshti
University of Medical Sciences, Tehran, Iran.

*Presenting Author: Milad Bonakdar Hashemi

Background: Partial adrenalectomy is typically performed for the treatment of hereditary and sporadic bilateral tumors, to reduce the risk of adrenal failure particularly in younger patients.

Partial adrenalectomy proposes a postoperative steroid-free course, nevertheless, is associated with the risk of local recurrence. In this study we evaluate the recurrence and functional outcomes after partial and total adrenalectomy.

Materials and Methods: Between March 2005 to July 2018, 284 patients underwent partial or total laparoscopic adrenalectomy for Conn's syndrome, Cushing's disease and Pheochromocytoma. Pre-operative and operative variables were collected from a prospective database. Long-term follow-up was obtained via patient survey.

Results: The overall recurrence rate was 5%, and 89% of the patients were steroid free. Recurrence rates were about 1% for Conn's syndrome, 3% for Cushing's diseases and 8% for Pheochromocytoma.

Conclusion: In our experience, partial adrenalectomy can provide excellent palliation of the symptoms and there was no significant difference in recurrence between partial adrenalectomy and total adrenalectomy.

Keyword: recurrence; laparoscopy; adrenalectomy

Ultrasound Guided Percutaneous Access to Kidney for Percutaneous Nephrolithotomy in Patients with Retrorenal Colon

Amir H Kashi; Iman Ghanaat*

Shahid Labbafinejad Medical Center, Urology and Nephrology Research Center, Shahid Beheshti University of Medical Sciences (SBMU), Tehran, Iran.

*Presenting author: Iman Ghanaat

Purpose: To report the feasibility of total ultrasound guided access for access establishment in cases of percutaneous nephrolithotomy (PCNL) candidates with retrorenal colon in preoperative computed tomography (CT) scan.

Methods: Three patients who were candidates for percutaneous nephrolithotomy and in their preoperative CT scans, there was evidence of retrorenal colon in all parts of the kidney or in some parts are reported. The ultrasound guided access was pre-planned.

Results: In two cases insertion of ureteral catheter during cystoscopy was possible and in one case it was not possible due to high riding prostate and urethral narrowing and bleeding during cystoscopy. In this latter case furosemide was administered after prone positioning and ensuring stable blood pressure after change of position to prone. Totally ultrasound guided access was planned in two cases and in one case additional fluoroscopy was used after ultrasound guided percutaneous access with Shiba needle for dilation step because of L shaped rotated kidney with lower pole traversing in front of vertebral column to the lower pole of the opposite kidney. Percutaneous access was successfully achieved in all cases. Operation was terminated as tubeless and the tract was visualized during nephroscope withdrawal in all cases for ensuring no passage through colon. Stone free status was achieved in 2 cases and in one case a residual stone was left due to vertical access tract in a horseshoe kidney and failure of rigid nephroscope to reach the upper pole of kidney with one residual 1 cm stone.

Conclusion: Using ultrasonography in patients with retrorenal colon who are candidates for PCNL can be an alternative to laparoscopy assisted PCNL in selected patients and for surgeons with experience in ultrasound guided PCNL. The advantage of this approach is avoidance of peritoneal entry.

Keywords: percutaneous nephrolithotomy; retrorenal colon; ultrasonography

The Effects of Intravenous Mannitol in Reducing Acute Kidney Injury Following Percutaneous Nephrolithotomy

Kaveh Mehravaran, Masood Etemadian, Pejman Shadpour, Mohammad-Mehdi Atarod*, Nasrollah Abian, Farshad Gouran, Roozbeh Roohinezhad

Hasheminejad Kidney Center (HKC), Iran University of Medical Sciences (IUMS), Tehran, Iran.

*Presenting Author: Mohammad-Mehdi Atarod

Introduction: Percutaneous nephrolithotomy is the procedure of choice in renal calculi greater than 20 millimeters. Previous studies have shown a reduction in GFR in the first few days following PCNL. Proposed mechanism for this phenomenon is bilateral renal vessel, vasospasm due to neural and hormonal mechanisms. Previous studies in partial nephrectomies have shown that using intravenous mannitol prior to renal artery clamping can reduce the risks of nephron loss. Considering these two findings, we decided to evaluate mannitol's effect on GFR following PCNLs.

Methods: In an interventional cohort study, 110 candidate patients for PCNL who met our inclusion criteria were divided into two equal groups by random. In the intervention group, 25 grams of mannitol was injected intravenously 15 minutes prior to surgery. Both intervention and control groups were compared by demographic and renal stone characteristics. Hb and GFR (by Cockcroft-Gault Equation) were checked one day before the surgery, 6 hours, one day, two days, and 2 weeks post operation.

Results:

110 candidate patients for PCNL who met our inclusion criteria were divided into two equal groups by random. Both groups were equal in demographic and renal stone characteristics. Mean preoperative GFR were 73.91 and 85.87 in the intervention and control groups respectively which were both classified in the 2nd stage of CKD classification.

Mean GFR in intervention group increased 6 hours after surgery (80.15), then decreased to 78.48 in two next days and finally improved to the level of 85.51 after two weeks. In the control group it decreased to the level of 78.63 gradually in the next two days following surgery but it increased to the approximately same level of preoperation's GFR (84.77).

Mixed between-within analysis of variance shows a meaningful effect of mannitol in improving GFR ($p < 0.001$) rather than control group with the effect size of 0.41.

Conclusion: Intravenous mannitol prior to PCNL reduces the risk of GFR drop especially in the first 48hours after surgery.

Keywords: PCNL, Mannitol, Acute Kidney Injury, GFR

Role of flexible ureteroscopy in diagnosis of the cause of chronic unilateral essential hematuria

Asghar Alizadeh^{1*}, M. R. Mokhtari¹, Kaveh Mehravaran², Pejman. Shadpour²

¹Shahid Mahallati Hospital, Tabriz, Iran.

²Hasheminejad Hospital, Tehran, Iran.

*Presenting Author: Asghar Alizadeh

Background and Aim: To show the efficacy of flexible ureteroscopy in detection of the location and cause of intrarenal bleeding lesions.

Methods: A 35 year old female with total gross hematuria and clot passage came to hospital. She had history of periodic gross hematuria and several blood transfusions from 10 years ago. Hematuria is usually asymptomatic. During these years all efforts to detect the cause and source of hematuria had been unsuccessful. She had no weight loss. Urine analysis showed many eumorphic RBC, WBC 2-3. Hb had always been low and other laboratory tests including Cr, Na, K, Ca, U/C, PT, PTT, INR, SGOT, SGPT, ALKP, C3, C4, ANA, RF, HBsAg, HCV Ab, HIV, urinary 24 Ca, urinary cytology, urine smear for BK were all normal.

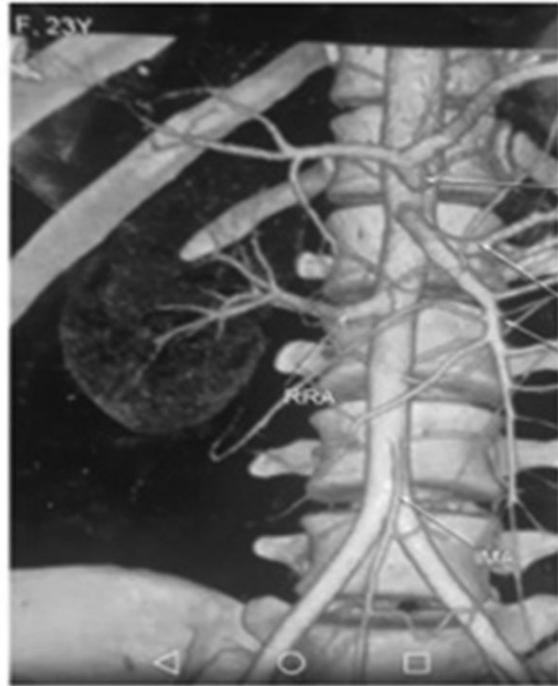
All imaging studies including renal ultrasonography (many times), abdominopelvic CT scan (figure 1) without and with IV contrast, renal CT angiography (figure 2), abdominal MRI with gadolinium, renal color Doppler ultrasonography for AVM were also normal except one renal sonography that mild right hydronephrosis was shown. Several times cystoscopy and a few times bilateral ureteroscopy were done and they were normal or the site of hematuria had not been detected.

Results: At admission, her primary Hb was 5 mg/dl so 4 units of packed cell was transfused. Then we did cysto-ureteroscopy. The bladder was washed out and seemed normal. The clear urine efflux was seen in left ureteral orifice. Right ureteral orifice was found challenging and completely bloody urine efflux was seen from it. With gentle use of guide wire right semi rigid ureteroscopy was done. Ureter was normal in all its course but the pelvis was completely bloody. No more evaluation was possible. Ureteral catheter was placed and retrograde ureterography was done the other day which was also normal.

A few days later gross hematuria resolved and the patient was discharged. A few weeks later at the time of no bleeding, she was referred to another center and diagnostic right flexible ureteroscopy was done for her. Systematic evaluation of all calices from superior-to-inferior was done. Lower calyx papillary were so large and congested and seemed to be the source of bleeding. Because of the large size of lesions and instrumental defects therapeutic fulguration was not possible.

Conclusion: Direct endoscopic systemic inspection of all calices with ureteropyeloscopy is recommended for chronic unilateral essential hematuria as a diagnostic and potentially therapeutic modality.

Keywords: hematuria; ureteroscopy



Our Experience in Transperitoneal Laparoscopic Pyelolithotomy for Large Renal Pelvic Stones

Hamid Pakmanesh*, Rayka Sharifian Amiri, Sohrab Mohammadsalehi

Department of Urology, Kerman University of Medical Sciences, Kerman, Iran

*Presenting Author: Hamid Pakmanesh

Introduction: PCNL superseded open surgery for the treatment of large kidney stones; however, recently, laparoscopic pyelolithotomy was evolved and is finding its role in the management of renal pelvic stones. We are reporting our results of selected patients with large pelvic stones who underwent laparoscopic pyelolithotomy.

Method: After obtaining informed consent, 49 patients with renal pelvic stones larger than 20mm were included in our study and underwent transperitoneal laparoscopic pyelolithotomy in flank position. Demographic data and stone size as well as operative time and complications were recorded.

Results: The average age was 52 years in men and 45 years in women. Average BMI was 23.3 kg. Three, six and two patients had previously underwent PCNL, SWL or TUL for stones in the same kidney respectively. Three kidneys had horseshoe anomaly, one patient had polycystic kidney and four patients had single functional kidney. Mean stone size was 25.34 mm. Stones were in the right kidney in 60 % of patients. Mean operation time was 136 minutes from induction to the end of anesthesia. Hemoglobin dropped 1.6 g/dl on average. Serum creatinine did not rise in our series. Patients were discharged after 3.33 days admission on average. Stone free rate was 93.88%.

Conclusion: Laparoscopic pyelolithotomy is safe and effective for selected cases in experienced hand and has excellent results.

Keywords: Pyelolithotomy; laparoscopy Urolithiasis

15-Years Experience with Laparoscopic Adrenalectomy at Hsheminejad Kidney Center(HKC)

Pejman Shadpour, Kaveh Mehravaran, Masoud Etemadian, Farshad Gouran, Mohammad Mehdi Atarod*,
Ruzbeh Rouhinezhad

Hasheminejad Kidney Center(HKC), Iran University of Medical Sciences(IUMS), Tehran, Iran.

*Presenting Author: M Mehdi Atarod

Introduction & Objectives: Laparoscopic adrenalectomy(LA) has become the golden standard for the surgical treatment of most adrenal conditions except known carcinoma. The benefits of a minimally invasive approach for various pathology and size are widely accepted. The present study updates the results of the past 15 years of experience of using LA in a single tertiary center in Tehran.

Material & Methods: In this study, 129 patients who had undergone LA over the past 15 years from 2004 to 2018 in HKC, were reviewed. The information of patients before, during, and post operation were extracted. All procedures were performed by using trans peritoneal methods.

Results: 129 patients including 43 men (33.3%) with mean age of 43.55 years were studied. All cases were successfully completed without any conversion. The average tumor size in these patients was 52.74 mm(10 to 180 mm). Lesions in 85 cases were in right- side, 42 in left-side and 2 cases were bilateral.

Pheochromocytoma was the most common pathology (31.8%), followed by adenoma (31%), myelolipoma (10.1%), endothelial cyst (6.2%), spindle cell and malignant pheochromocytoma (8%), gangelionuroma and adrenal cortical carcinoma (5.4%), psudocyst (4.7%) cortical hyperplasia (2.3%) and onchocytoma(1.6%).

The average operative time was 87 minutes mean bleeding volume was 107 cc and mean hospital stay was 2 days.

Conclusion: Our results in this series suggest that LA is not only feasible and safe but capable of handling large masses too.

Keywords: adrenalectomy, laparoscopy

Epidemiology of Escherichia Coli ST131 as an Emerged High-Risk Clone in Patients with Urinary Tract Infections in Western Asia: A Systematic Review and Meta-Analysis

Alireza Jafari^{1†*}, Siavash Falahatkar^{1†}, Kourosh Delpasand², Hoda Sabati³, Hadi Sedigh Ebrahim-Saraie²

¹Urology Research Center, Razi Hospital, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.

²Biotechnology and Biological Science Research Center, Faculty of Science, Shahid Chamran University of Ahvaz, Iran.

³Razi Clinical Research Development Center, Razi Hospital, Guilan University of Medical Sciences, Rasht, Iran

† These authors contributed equally to this work.

*Presenting Author: Alireza Jafari

Escherichia coli sequence type (ST) 131 was identified as a high-risk pandemic clone and frequently extended-spectrum β -lactamase (ESBL) producing clone that is strongly associated with the worldwide dissemination of CTX-M-15 type. The emergence of ST131 has become a public health threat because this clonal group typically exhibit multiple virulence factors and antimicrobial resistance. Therefore, the present study aimed to analyze the published literatures to estimate the prevalence of ST131 clone among *E. coli* strains isolated from patients with urinary tract infection (UTI) in Western Asia, where antibiotics consumption is high. A systematic search was carried out to identify eligible papers in the Web of Science, PubMed, Scopus, Embase, and Google Scholar electronic databases from January 2010 to December 2018. Then, 13 articles which met inclusion criteria were selected for data extraction and analysis by Comprehensive Meta-Analysis Software. The included articles consisted of studies conducted in Iran, Jordan, Kuwait, Pakistan, Saudi Arabia, Turkey, and Yemen. In all, the pooled prevalence of ST131 in wild type isolates was 24.6% (95% CI: 13.5%-40.4%). The prevalence of ST131 among ESBLs-producing isolates was 42.7% (95% CI: 32.5%-53.5%). The prevalence of ST131 clone among multiple-drug resistant (MDR) isolates was 64.8% (95% CI: 36%-85.5%). Moreover, the prevalence of ST131 isolates carrying CTX-M-15 type was 68% (95% CI: 48.4%-82.8%). Our study demonstrates a high prevalence of broadly disseminated ST131 clone among MDR and ESBLs in western Asia. Moreover, O25b was accounted as the predominant ST131 clone type, which was mostly associated with CTX-M-15 type.

Keywords: Escherichia coli; ST131; ESBL; CTX-M-15; Asia
