

Poster Session 6 - Unmoderated - All Day Viewing - Pediatrics, Calculi, Sexual Medicine, Urothelial Cancers

5:30 - 6:30pm Sunday, 31st October, 2021

40 Monitoring of Voiding Pattern as Part of Objective Evaluation of Successful Proximal Hypospadias Repair Using Bracka's Method of Urethroplasty

Mohamed Rasheed Professor¹, Mohamed Bendary Professor¹, Mahmoud Damhougy M.D.², Mohamed Salah Urologist², Salah Nagla M.D.¹

¹Urology department, Tanta University Hospital, Tanta, Gharbeya, Egypt. ²Urology Department, Tanta Insurance Hospital, Tanta, Gharbeya, Egypt

Abstract

Objectives:

Penile Perception Score (PPS) seems to be a reliable instrument to assess cosmetic outcome of hypospadias surgical repair. Moreover, urine flow study is crucial for urethral function. The objective of the present work is to validate the use of voiding pattern monitoring, in addition of Penile Perception Score in studying cosmetic and functional outcomes following successful proximal hypospadias repair using Bracka's method urethroplasty.

Patients and methods:

Sixty toilet trained children, 5-10 years old following successful Bracka's method of proximal hypospadias repair were collected in the current study. Preputial skin flap was used in 30 cases (group I), and buccal mucosa graft was used in 30 boys (group II).

Children parents were asked to complete the Penile Perception Score (PPS) questionnaire, to assess satisfaction with hypospadias repair with 0-3 points Likert scale. Moreover, 4 Pediatric Urologists, not involved in the repair, were asked to assess cosmetic outcome of the repair with 4 photos of non erect penis. Furthermore, parents were asked about urine flow force and stream direction on 0-3 Likert scale. While the Urologists to evaluate the urine flow with two voiding photos and Q-max measure.

Results:

Parents PPS questionnaires were significantly higher than Urologists assess in both groups I ($p=0.014$) & II ($p=0.023$). Moreover, there was no significant difference of voiding pattern satisfaction between parents and Urologists in both groups. Two cases in group I and one boy in group II had weak stream and Q-max <10 ml/sec. They were radiologically evaluated and managed accordingly. On the other hand, three boys each group with deviated, strong stream (Q-max >10 ml/sec) responded to urethral dilatation. The last two boys of group I and one child of group II with deviated strong stream needed meatoplasty.

Conclusion:

Children parents in the current study showed satisfaction with cosmetic outcomes of their surgical repair with Bracka's technique of urethroplasty. Moreover, voiding pattern monitoring by children parents and Urologists was important for diagnosis of the neourethra malfunction among few cases in the present study.

97 Residency Training in Neonatal Circumcision Contraindications and Complications

Victoria A Maxon DO, Matthew Kasprenski MD
Tripler Army Medical Center, Honolulu, HI, USA

Abstract

Introduction and Objective

Pediatric residents are expected to perform routine neonatal circumcision. We compared pediatric residents' confidence in identifying circumcision contraindications and complications before and after initiation of an educational handout created by the urology department.

Methods

Study participants included 25 pediatric residents working at Tripler Army Medical Center between 2019-2020. Among them, 7 (28%) were PGY-1, 8 (32%) were PGY-2, and 10 (40%) were PGY-3. The initial survey asked residents to rate their confidence in performing a circumcision, identifying contraindications, reasons to abort and the management of complications. Over the course of 6 weeks, residents were asked to review an educational handout that was designed to address each topic listed in the original survey through images and text.

Results

Despite residents being confident in performing a circumcision (90%), residents did not feel confident in identifying contraindications (78%), reasons to abort (73%) and the management of complications (57%). After reviewing the handout, residents were 10.5% more likely to feel confident about identifying contraindications, 13.6% more likely to feel confident about reasons to abort, and 22.7% more likely to feel confident about identifying complications.

Conclusions

A knowledge gap still exists in resident education regarding routine neonatal circumcision. Although this study is limited by the number of participants, it further emphasizes the need for formal training for residents in this procedure.

135 Hematuria and FAST in the Evaluation of Pediatric Blunt Renal Trauma

Cayde D Ritchie M.D., Gabriel E Martin B.S., Mohamed Keheila M.D., Minh Chau M.D., David A Chamberlin M.D., Joshua D Chamberlin M.D., Catherine Chen M.D.
Loma Linda University, Loma Linda, CA, USA

Abstract

Objectives: Renal injuries are graded based on the American Association for the Surgery of Trauma (AAST) scale. The majority of low-grade injuries are managed non-operatively, while some high-grade injuries require surgical intervention. Current AUA Urotrauma guidelines emphasize the role of contrast-enhanced cross-sectional imaging in the evaluation of blunt abdominal trauma. Given radiation risks in children, we evaluate the clinical efficacy of hematuria and focused assessment with sonography for trauma (FAST) in predicting high-grade renal injuries.

Methods: We performed a retrospective review of all pediatric blunt trauma at a level 1 pediatric trauma center between January 2014 and April 2020. Patients with renal injury in the setting of blunt abdominal trauma were included. Renal injury was graded using the AAST renal injury scale, based on triphasic CT. Injuries were categorized as low-grade (AAST 1-3) and high-grade (AAST 4-5). Outcome measures were the presence of significant microscopic hematuria (>50 RBC/hpf), gross hematuria and abnormalities on FAST ultrasound. Statistical analysis was performed using chi-squared testing via SPSS, with significance defined as $p < 0.05$.

Results: A total of 116 pediatric patients with blunt abdominal trauma were reviewed. 58 had renal injuries, and 46 of those were graded using triphasic CT. Significant microscopic hematuria was found in 60% of low-grade (18/30), versus 67% of high-grade renal trauma (8/12) [$p=0.69$]. Gross hematuria was found in 30% of low-grade (10/33), versus 67% of high-grade renal trauma (8/12) [$p=0.028$]. FAST exams were performed in 57% of patients (26/46), and were positive in 30% of low-grade (6/20) and 67% of high-grade trauma (4/6) [$p=0.16$]. 46% of high-grade renal injuries required genitourinary surgical intervention (6/13), compared to 0% of low-grade injuries (0/33) [$p=0.0002$].

Conclusions: In the setting of blunt abdominal trauma, high-grade renal injuries were associated with a significantly greater rate of gross hematuria than low-grade injuries. Microscopic hematuria and FAST ultrasonography could not reliably distinguish between low-grade and high-grade renal injuries. Triphasic cross-sectional imaging continues to be important in the evaluation of pediatric blunt renal trauma and identification of high-grade renal injuries.

Source of Funding: None

83 Pediatric Stuttering Priapism: Prevention with Tadalafil

Gabriel E. Martin B.S., Cayde Ritchie M.D., Edmund Ko M.D., Joshua D. Chamberlin M.D.
Loma Linda University, Loma Linda, CA, USA

Abstract

Objectives: Stuttering priapism (SP) or recurrent ischemic priapism is uncommon in adult males and is extremely rare in the pediatric population. Pediatric priapism may be secondary to sickle cell disease, leukemia, or trauma. Knowing the etiology allows for treatment in the acute setting and prevention of future episodes. A subset of SP is idiopathic and may be related to endothelial dysfunction. Complications of SP may include erectile dysfunction (ED), penile disfigurement, and psychologic sexual aversion. Given the limited data on pediatric priapism, the treatment algorithms are extrapolated from the adult literature. There is evidence in the literature that daily phosphodiesterase type 5 inhibitor (PDE5i) use can augment and reverse endothelial dysfunction and potentially decrease priapism recurrence rates in the adult population. To our knowledge, we present the first case of successful prevention of SP with tadalafil in a pediatric patient.

Materials and Methods: This is a case report of a pediatric patient with refractory SP treated with tadalafil. We performed a retrospective chart review, evaluating number of ER visits, hospital location, treatment modalities, and interventions. We collected clinical data including blood work, cavernosal blood gas, and response to treatment. We evaluated his time to priapism recurrence.

Results: A 17-year-old male experienced 9 episodes of ischemic SP over the course of 6 weeks. During this time, he was seen at 4 hospitals and underwent 7 treatments of penile irrigation with aspiration and phenylephrine injections. Etiology for priapism was idiopathic; as his evaluation was negative for sickle cell, malignancy, blood dyscrasias, and trauma. Hormonal workup was normal. After his 8th episode of priapism, he took tadalafil 2.5 mg qAM for the next 30 days. After taking the medication for two days, he remained priapism free for the next 8 months. Treatment with daily tadalafil spared the patient additional treatment including irrigation, aspiration, or penile shunting, thereby reducing the risk of potential long-term complications.

Conclusions: Use of tadalafil in a pediatric patient with idiopathic SP prevented future episodes. Further study is required to establish a safety profile, optimal dosage, and duration of treatment in the pediatric population for this off-label use of tadalafil.

If funding provided, type in source company / entity name(s):

NONE

190 Urinary retention in children dependent on chronic enteral feeds

Gunjan Agrawal Mbbs, MPH, Sean Berquist MD, Justine Dela Cruz MSN, Kathleen M. Kan MD
Stanford University, Stanford, CA, USA

Abstract

Background:

Children on chronic enteral feeds (CEF) represent a complex clinical scenario with multifactorial etiologies of voiding dysfunction. Enteral feeds may provide a non-physiologic form of nutrition in terms of timing and volume of supplementation, leading to chronic bladder overdistension and decompensation. No previous study characterizes the relationship between CEF and urinary retention (UR). We sought to better characterize the presentation and health care utilization of acute and chronic urinary retention (AUR, CUR) in this population.

Methods:

We conducted a retrospective case series at our institution from 2014-2021. Children with chronic enteral tubes and a diagnosis of UR were included (n=21). Children with diagnoses associated with neurogenic bladder or renal transplant were excluded. Demographic variables, enteral feed regimens and retention presentation, AUR vs. CUR (> 3 months duration) were collected.

Primary outcome was number of patients in each group (AUR vs CUR). Secondary outcomes included characterization of feed schedule, timing of feeds, and proportion of feed volume vs. oral intake.

Results:

52% of patients were male. 95% had a documented history of volitional voiding, 28% were potty trained. The median age of first retention episode was 9.8 years with the earliest onset at 1.5 years. Oral motor dysfunction was the most common reason for initiating feeds (85%). 19% of patients used a ketogenic formula. 47% had associated constipation.

7 patients were found to have AUR (47.6%), 10 had CUR. There was no significant difference between the two groups in terms of feed schedule (continuous vs bolus or cyclic or mixed), timing of feeds (daytime only vs nighttime \pm daytime) or in those receiving additional oral intake.

38% of patients were seen in a pediatric urology clinic. 52% underwent ultrasound or urodynamic study. 19% were managed with intermittent catheterization and 33% discussed improving constipation. No patients required medication.

Conclusions:

Patients with non-neurogenic bladder may present with AUR or CUR regardless of timing, schedule or additional oral feeds. Small numbers limit secondary outcome analysis. Current screening practices for hematuria or incontinence by providers who manage feeds may not be sufficient to prevent UR. Future studies of larger populations are needed.

104 Fat Necrosis Mimicking Renal Cell Carcinoma Recurrence Following Cryotherapy, Partial Nephrectomy, and Nephrectomy

Laura E Geldmaker B.S., Christian A Ericson M.D., Bryce A Baird M.D., Daniela A Haehn M.D, Qihui (Jim) Zhai M.D., Aziza Nassar M.D., David D Thiel M.D.
Mayo Clinic, Jacksonville, FL, USA

Abstract

Objective: To present our experience with three patients surgically treated for suspected recurrent renal cell carcinoma whose final pathology was consistent with tumefactive fat necrosis.

Methods: Three patients underwent definitive therapy for biopsy proven renal cell carcinoma (cryoablation, partial nephrectomy, and nephrectomy) and later demonstrated evidence of recurrent renal cell carcinoma on follow up imaging. All three patients underwent surgical resection of the suspected recurrences with final pathology consistent with tumefactive fat necrosis.

Results: The three patients were 60, 74, and 39-years old, respectively. The previous definitive therapies for renal cell carcinoma were percutaneous ablation, RAPN, and nephrectomy. Each patient had previous surgical pathology that confirmed prior renal cell carcinoma. Signs of recurrence on diagnostic imaging occurred 2 years, 23 months, and 8 months post-definitive therapy.

Conclusions: In patients with a history of renal cell carcinoma, consideration of fat necrosis should be taken into account upon seeing imaging concerning for tumor recurrence. Continued analysis of cases with such a diagnosis will be beneficial in recognizing this possibility to avoid unnecessary surgery or therapy when possible.

32 Analysis of Fixed Operating Room (OR) Time Variables in Partial Nephrectomies: Open Versus Robotic-assisted

Laura E Geldmaker B.S., Joseph A Ivey M.D., Daniela A Haehn M.D., Christopher H Hasse FACHE, Abena N Anyane-Yeboah MHA, Mikolaj A Wieczorek B.S., Colleen T Ball M.S., David D Thiel M.D.
Mayo Clinic, Jacksonville, FL, USA

Abstract

OBJECTIVE: Fixed OR time is defined as any time other than surgeon operating time (cut to close). Our institution utilizes the same patient positioning and sterile preparation for robotic-assisted partial nephrectomy (RAPN) and open partial nephrectomy (OPN). Our objective was to evaluate the variation in efficiency between open and robotic-assisted partial nephrectomies through an analysis of both fixed and variable OR times.

METHODS: Over a 24-month consecutive period we reviewed all open partial nephrectomies (OPN) and robotic-assisted partial nephrectomies (RAPN) performed by a single surgeon at our tertiary institution. Fixed OR times were prospectively collected and were defined as: in room time to anesthesia release time (IRAT), anesthesia release time to cut time (ARCT), in room time to cut time (IRCT) (combines IRAT and ARCT), and close time to wheels out time (CTWO). Variable OR time was cut to close time (CTCT). The Fisher exact test was utilized to compare groups for categorical variables and the Wilcoxon rank sum test was utilized to compare groups for continuous variables. P values less than 0.05 were considered statistically significant in our analysis. Our institution performed robotic procedures with the Da Vinci Xi surgical system (Intuitive Surgical Company Sunnyvale, CA, USA).

RESULTS: Over the 24-month period, 146 RAPN and 31 OPN were performed. Median IRAT was the same for both RAPN (20.0 minutes (min), range: 10.0-53.0) and OPN (20.0 min, range:11.0-98.0) ($P=0.57$). Median ARCT was longer for RAPN (40.0 min, range: 7.0-70.0) than it was for OPN (33.5 min, range: 2.0-52.0) ($P<0.001$). IRCT median time was longer for RAPN (62.0 min, range: 6.0-87.0) compared to OPN (55.0 min, range: 42.0-100.0) ($P <0.005$). Median CTWO was similar for OPN (12.0 min, range: 1.0-39.0) and RAPN (11.0 min, range: 1.0-50.0) ($P =0.89$). CTCT median time was longer for RAPN (202.0 min, range: 102.0-384.0) compared to OPN (164.0, range: 104.0-222.0) ($P<0.001$).

CONCLUSIONS: In a single surgeon series for procedures with the same patient positioning and sterile preparation, utilization of robotic technology for partial nephrectomies was associated with longer surgeon operating time as well as less efficient fixed OR times, specifically ARCT.

229 Reducing Readmissions Following Radical Cystectomy

Lee W White MD, PhD

Stanford, Stanford, CA, USA

Abstract

Radical cystectomy for persistent or invasive bladder cancer is a life saving, yet highly morbid procedure. Nationally and at Stanford, readmission rates in the 30 days after surgery persist at 30%, a rate significantly higher than other urologic procedures, and procedures in other fields of similar risk and complexity. This year, within the Clinical Effectiveness and Leadership Training program, a multidisciplinary team set out to lower the rate of readmissions following cystectomy.

We measured the Stanford cystectomy readmission rate by examining National Surgical Quality Improvement Program (NSQIP) reports. When compared against billing and schedule data, we saw considerable mismatch. We thus performed a manual review of cystectomy procedures from the surgical schedule for 2018, 2019, and 2020. We identified 217 cases with a readmission rate of 28-32%. We categorized the readmissions and produced a Pareto chart. The principal cause of readmission was intraabdominal and urinary tract infection: 18-21%.

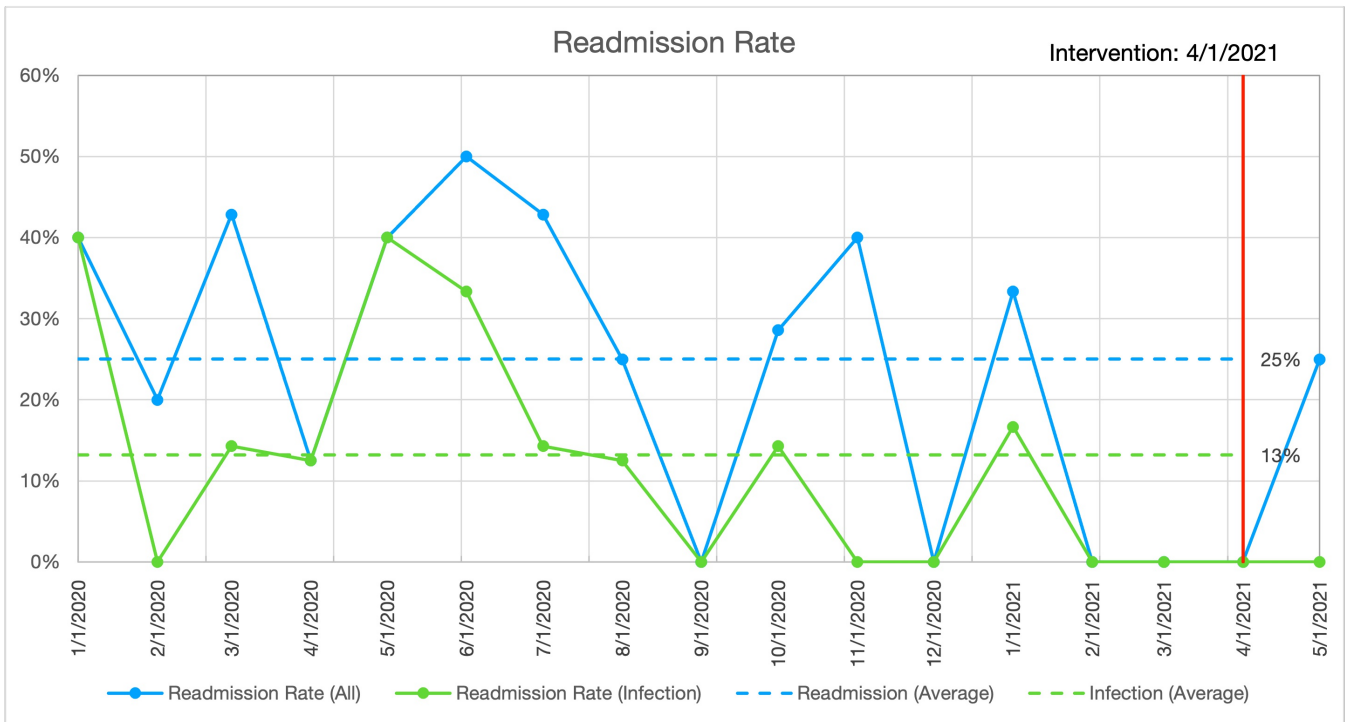
We designed a SMART goal: "To reduce the rate of readmission due to infection following radical cystectomy to 10% from the 18% by October 1, 2021. We performed a root cause analysis and literature search to design an 'intervention bundle' to reduce readmissions due to infection:

- Preoperative referral nutrition for supplements and optimization
- Seamless MD education platform enrollment
- Standardized teaching for post-operative inpatients
- Remove ureteral stents by POD 4
- Methenamine infection prophylaxis for 1 month
- Outpatient care team coordination at discharge
- Telehealth visit within 3 days of discharge, then weekly

We initiated our intervention on April 1, 2021.

In the 2 months since our 'intervention bundle' initiation, we have performed 7 radical cystectomies. 1 patient was admitted to an outside hospital with pain. No patients have been readmitted for infection. Process measures have also improved. Days to stent removal has improved from 21.3 days to 7.7 day (goal 4 days). Days to clinic follow-up on discharge improved from 6.3 days to 3.6 days (goal: 3 days).

https://drive.google.com/file/d/1AULFbKqHzidgYbUSAwgDtv_WvvPL1zNj/view?usp=sharing



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None

15 Significance of high normal serum calcium levels in a group of prospectively enrolled recurrent calcium kidney stone patients in community practice.

Mark E Gasparini MD¹, Stephen Vandeneeden PhD²

¹Kaiser Permanente, South San Francisco, CA, USA. ²Kaiser Permanente, Oakland, CA, USA

Abstract

THE SIGNIFICANCE OF HIGH NORMAL SERUM CREATININE LEVELS IN RECURRENT CALCIUM STONE FORMERS.

Mark E. Gasparini M.D., Jun Shan PhD, Marvin E. Langston PhD, Stephen K. Van Den Eeden PhD.

South San Francisco California

Objectives: The American Urological Association Guideline on the Medical Management of Kidney Stones state that primary hyperparathyroidism should be suspected when the serum calcium is high or high normal. The level that constitutes high normal is not defined and the risk of hyperparathyroidism in recurrent calcium stone formers with high normal serum calcium is not well described in the literature. The purpose of this study is to evaluate the occurrence of high normal serum calcium (sCa) levels in recurrent calcium stone formers and their risk of normocalcemic or primary hyperparathyroidism.

Materials and Methods: 3024 recurrent calcium stone patients were enrolled into a regional kidney stone prevention program between November 2016 and March 2021 in a large integrated health care system. The main outcome measure was the number of patients with a high normal serum calcium of 10.0 - 10.5 mg/dL (normal serum calcium <10.5 mg/dL) and Primary Hyperparathyroidism (PHP) or Normocalcemic Hyperparathyroidism (NCHP). A secondary outcome was the serum calcium level that was most predictive of PHP or NCHP.

Results: 229 of 3024 (7.6%) recurrent calcium stone formers had a high normal sCa of 10.0 - 10.5, and 200 of these patients completed a full work up. 7% or 14 of the 200 recurrent calcium stone patients with a serum calcium in the high normal range of 10-10.5 mg/dL were found to have either NCHP (9) or PHP (5) on further work up. 5 had surgery for a parathyroid adenoma with subsequent normalization of serum calcium and PTH in all patients; 6 are pending surgery and 3 refused treatment. Secondary analysis revealed that 2.5% of those with sCa 10.0-10.2 and 23.3 % of those with sCa 10.3-10.5 had either NCHP or PHP.

Conclusions: A small number of recurrent calcium stone formers with high normal serum calcium levels 10.0 - 10.5 mg/dL will have NCHP or PHP and discrimination is increased with sCa levels above 10.2 mg/dL.

35 PCNL Complications Nightmare of Urologist

Kamran Hassan Bhatti MS

HMC, AKH, QATAR, Qatar

Abstract

The European Association of Urology (EAU) Urolithiasis Guidelines suggest that the primary treatment of renal stones <2 cm should include extracorporeal shock wave lithotripsy (SWL) and retrograde intrarenal surgery (RIRS) and that the primary treatment for renal stones >2 cm should include percutaneous nephrolithotomy (PCNL)

. Methods: To find major and minor PCNL complications and their management .After Ethical Approval By IRB, We retrospectively analysed the outcomes of 200 patients who underwent PCNL between 01 Jan 2014 to 31 December 2019.

Data analysed included patient demographics, investigations, site of calyceal puncture, operative time, number of tracts, stone-free rates (SFRs), hospital stay, and complications.

Results: Out of 200 patients, 170 (85 %) were males and 30 (15 %) were females. The mean age was 36.4 ± 11.8 years (range: 18 - 74). The mean operative time was 110 ± 40 min (\pm standard deviation (SD)). The mean hospital stay duration was 3.2 ± 1.6 days. Complete stone clearance was 90.18% .The complication are as Urinoma 02 patients,Bleeding 16 patients,Hematuria 09 patients, Renal pelvic injury 01 patient, post operative fever 14 patients ,extravasation 05 patients ,Sepsis 07 patients, pyelonephritis 02 patients,Colonic Injury 01 patient,Arteriovenous Fistula 03 patients ,average length of stay 3.89 days .Ancillary Procedure: Relook PCNL 05 patients,ESWL 12 patients and Flexible URS 13 patients.

Conclusions: PCNL is the standard treatment for large renal stones > 2 cm. Stone burden, type of stone, access puncture, and several tracts, and operative time significantly affect SFRs. With the miniaturization of instruments and the development of different lithotripsy techniques, PCNL remains a very good treatment for large renal stones with acceptable complication rates.

Keywords: Percutaneous nephrolithotomy, Stone-free rates; Flexible nephroscope; Staghorn stone

Funding.non

36 ESWL Still Alive ?

Kamran Hassan Bhatti MS

HMC, AKH, QATAR, Qatar

Abstract

Extracorporeal shockwave lithotripsy was first introduced in 1980 as an alternative method for treating renal stone to the conventional open surgical method. ESWL remains one of the most utilized treatments for patients with upper urinary tract calculi.

Keywords: Kidney; Ureter , Extracorporeal shockwave Lithotripsy; Stone, Complications.

Objectives;

We aim to evaluate the factors affecting the efficacy of ESWL and to explore more risk factors of early and delayed ESWL complications.

Results;

After ethical Approval by IRB .Our study included total 200 patients. Among them 170 patients 85 % were male with the remaining 30 female patients 15 %. Age range was 22–74 years (34.2 ± 11.55), and BMI range 24–40 (28.74 ± 5.25). 6 patients 3 % were treated for the residual stone after undergoing PCNL. 35 patients 17.5 % had JJ stent either inserted for stone larger than 20 mm or stone in the ureteropelvic junction causing renal obstruction. Fluoroscopic stone localization was achieved in 170 patients 85 % with only 30 patients 15 % requiring ultrasound guided stone localization. Patients were followed until 3 months after treatment. 170 patients (85 %) had complete stone clearance. Fifteen patients (7.5 %) had residual stone less than 4 mm, thus achieving an overall success of 185 patients (92.5 %). 45 patients (22.5 %) needed repeat session of ESWL with a maximum number of 3 sessions. 20 patient's (10 %) required auxiliary procedures like flexible ureteroscopy. Post-ESWL complications were recorded in 19 patients (9.5 %). Success rate was affected mainly by stone size with negligible effect of stone location. Presence of stent affected the number of sessions but has no impact on stone clearance.

CONCLUSION; ESWL is safe and effective for treating renal and ureteric stones. Data from our center shows an improved success rate of 92 % for renal and ureteric stones with very minimal and conservatively manageable complications. Therefore, it will be more appropriate using this economic and effective therapy for treating urinary calculi, especially up to 20 mm in diameter.

Source of funding ; no

13 Kidney Stone Surgical Interventions: Nationwide Interest Trends and Qualitative Assessment of Popular Resources on Social Media from 2016-2021

Parris Diaz BS¹, Rebecca A Takele BS², Sapna Thaker BS³, Karan N Thaker BS³, Jorge Ballon BS¹, Mayra Lucas B.S.³, Kymora B Scotland MD/PhD³

¹David Geffen School of Medicine at UCLA/Charles R. Drew University of Medicine and Science, Los Angeles, CA, USA. ²Edward Via College of Osteopathic Medicine-Virginia, Blacksburg, Virginia, USA. ³David Geffen School of Medicine at UCLA, Los Angeles, CA, USA

Abstract

Objectives: Patients with kidney stones have traditionally relied on their urologists for information on surgical management. As online resources have become more accessible, patients often scour the internet for answers before consulting their physicians. We sought to evaluate online interest in kidney stone surgical interventions and assess the quality of the most popular resources on social media.

Methods: Google Trends was used to evaluate public interest in different kidney stone interventions over a 5-year period between March 2016-February 2021 and reported as search volume index (SVI). SVI is defined as the frequency of keywords used on Google's search engine relative to total search volume in a given time period ranging from 0-100. Next, BuzzSumo, a social-media analysis tool, was used to identify the most popular stone surgery content on various social media platforms over the same 5-year period. To evaluate the quality of health information present in the most popular articles online, three individual raters used the DISCERN instrument. Quantitative data were examined by Analysis of Variance (ANOVA).

Results: The top three search terms related to kidney stone surgical interventions on Google Trends were identified as Ureteroscopy (URS), Percutaneous Nephrolithotomy (PCNL) and Extracorporeal shock wave lithotripsy (ESWL) with mean SVI's of 47.75, 42.98, and 45.74 respectively (P=.012). Nine articles were chosen for analysis (Figure 1) using the DISCERN tool with a mean score of 2.82 (P=.57) among evaluators. Thus, article quality fell below the DISCERN threshold of 3.0 to be considered "Moderate-Quality".

Conclusion: Our research suggests that of stone surgery interventions, patients are most interested in URS, but engaged more with PCNL content on social-media platforms. This indicates there may be a discrepancy in what patients want and what information is available. The low-quality of popular articles on social-media pertaining to kidney stone surgical interventions highlights the need for involvement of urologists in the creation of engaging high-quality content and accurate information sharing in a social-media driven society.

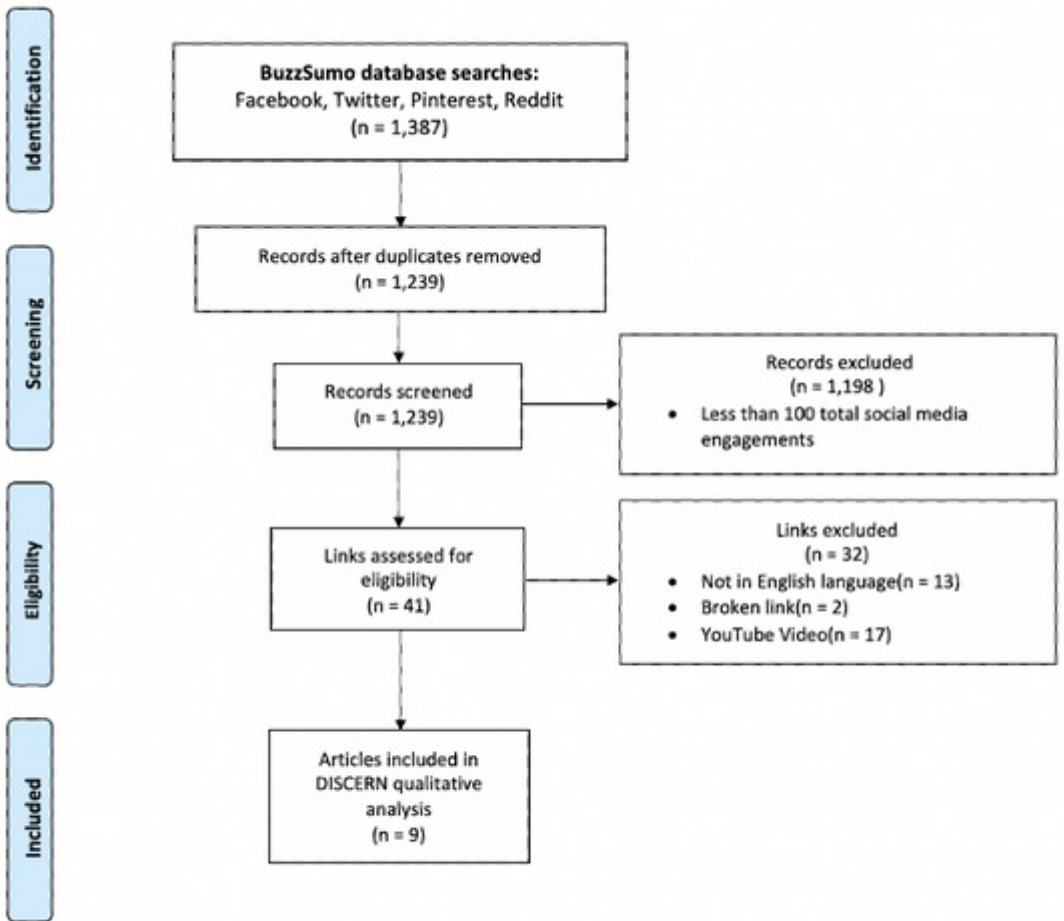


Figure 1. Summary of BuzzSumo database review using PRISMA statement.
Engagements = Cumulative shares, likes, and comments attributed to an article.

137 Rates and Prevention of Residual Ureteral Fragments After Percutaneous Nephrolithotomy

Aman Arora MPH¹, Steven Monda MD², Ghaneh Fananapazir MD³, Noah E Canvasser MD²

¹UC Davis School of Medicine, Sacramento, CA, USA. ²UC Davis Department of Urologic Surgery, Sacramento, CA, USA. ³UC Davis Department of Radiology, Sacramento, CA, USA

Abstract

Objectives: Percutaneous nephrolithotomy (PCNL) represents the most efficacious procedure to treat large renal stones, although residual fragments post-procedure are common. While renal fragments have been studied, there is less information regarding retained ureteral fragments, a more urgent sequelae. During PCNL, various techniques exist to prevent and identify ureteral fragments, including occlusion balloons, antegrade ureterography, and antegrade ureteroscopy. We determined the rate of ureteral fragments immediately after PCNL in a single-institution series, and looked at predictors for this outcome. We hypothesized that performing antegrade ureteroscopy eliminates the chance of significant ureteral residual fragments.

Methods: We retrospectively reviewed all patients who underwent PCNL between August 2017 and July 2020 at our institution. Patient demographics, stone variables, and operative techniques were recorded. All patients underwent a CT on postoperative day (POD) 1. Each CT was re-reviewed by an abdominal radiologist to identify all retained ureteral fragments. We defined significant fragments as >2 mm.

Results:

Table 1: Patient Demographics and Stone Characteristics

	Total patients (N = 125)	No Ureteral Fragments (N = 110 pts)	Ureteral Fragments (N = 15 pts)
Mean age +/- SD	59.2 +/- 15	59.9 +/- 14.6	54 +/- 17.1
Gender			
<i>Male</i>	42% (52)	41% (45)	47% (7)
<i>Female</i>	58% (73)	59% (65)	53% (8)
Race			
<i>White</i>	82% (103)	85% (92)	73% (11)
<i>Other</i>	6% (8)	3% (4)	27% (4)
<i>Asian</i>	5% (6)	5% (6)	0%
<i>African American/Black</i>	4% (5)	4% (5)	0%
<i>Native American/Pacific Islander</i>	2% (2)	2% (2)	0%
<i>Decline to state</i>	1% (1)	1% (1)	0%
Mean BMI +/- SD	30.3 +/- 9	30.4 +/- 9.3	29.4 +/- 10.5
Bilateral stones	9% (11)	7% (8)	20% (3)
Mean target stone size (mm) +/- SD	23.8 +/- 11	23.4 +/- 10.2	27 +/- 16.5

A total of 125 patients with 139 renal units were reviewed. Table 1 lists patient demographics and stone

details. Of these, 30% had an occlusion balloon, 47% had antegrade ureterography, and 56% underwent antegrade ureteroscopy at the conclusion of the case. We identified 16 renal units (12%) with a ureteral fragment on POD #1. Each unit only had 1 ureteral fragment with a median size of 2 mm. Of these, 14 fragments were clinically insignificant (< 2mm). In patients with an occlusion balloon, antegrade pyelogram, and antegrade ureteroscopy, rates of all ureteral fragments were 14%, 8%, and 10%, respectively. The significant fragments requiring second-look ureteroscopy were 9 mm and 13 mm. One had an antegrade ureteogram, neither had an occlusion balloon or underwent antegrade ureteroscopy at the conclusion of the case.

Conclusions: Significant residual ureteral fragments after PCNL are rare, but represent a morbid finding as they necessitate an early second look procedure. Antegrade ureteroscopy appears to effectively eliminate this complication, though the rarity of the event prevents statistically significant conclusions.

211 The erector spinae plane block can facilitate outpatient stone surgery by reducing breakthrough pain

Heiko Yang MD, PhD

UCSF, San Francisco, CA, USA

Abstract

Objectives: To evaluate whether the novel thoracic erector spinae plane block (ESPB) can reduce postoperative breakthrough pain, eliminate the need for intravenous (IV) opioids, and increase patients' preference for same-day discharge after PCNL.

Subjects and methods: A prospective study of adult patients undergoing percutaneous nephrolithotomy (PCNL) was conducted at our institution from May 2020 to January 2021. Patients with a history of chronic pain and opioid use were excluded. Participants in the intervention group received an ultrasound-guided T11 E prior to the start of the procedure. Patients were admitted postoperatively and prescribed an oral pain regimen; IV opioids were prescribed only upon request. "Breakthrough pain" was defined as verbal pain score ≥ 7 or IV opioid administration within 24 hours after surgery. A post-operative survey was conducted to assess the surgical experience and preference for same-day discharge over admission.

Results: A total of 56 patients undergoing PCNL were included in our study, of whom 23 successfully received ESPB. We found that 78% of patients in the ESPB group compared to 47% in the control group were successfully managed with oral analgesics alone without breakthrough pain ($p = 0.03$). ESPB significantly lowered the odds of having breakthrough pain after adjusting for factors such as age, sex, dilated tract size, and tract location (OR 0.21, 95% CI 0.050-0.78). Patients in the ESPB group were twice as likely to prefer same-day discharge for a future procedure compared to those in the control group (58% vs 29%).

Conclusions: Patients who receive ESPB have better pain control with oral analgesics alone, which makes same-day discharge more feasible. The ESPB can be incorporated in routine perioperative workflow and holds great promise in facilitating ambulatory PCNL.

If funding provided, type in source company / entity name(s):

None

158 Hygienic Keyboards: Designed to Reduce Infections, But May Increase Mistakes and Medical Errors

Phillip Stokes MD, Ruth Belay MD, Joshua D. Belle MD, Mohamed Keheila MD, Akin S. Amasyali MD, Mohammad Hajiha MD, Daniel Baldwin MS, D. Duane Baldwin MD
Loma Linda University, Loma Linda, CA, USA

Abstract

Introduction:

Normally, an important goal for health care institutions is to reduce hospital-acquired infections. This has become even more pervasive in the COVID-19 era. One technique suggested to reduce transmission of infection is the use of a novel flat computer keyboard which is easier to sterilize. Our institution replaced conventional keyboards with a flat “hygienic” keyboard covered by silicone. Although these keyboards are easily cleaned, lack of tactile feedback from conventional keys could make typing more difficult, potentially increasing errors. Medical errors cost \$20 billion and are responsible for 100,000 deaths per year in the United States. Present study aimed to compare accuracy, speed and error correction rates between this flat keyboard and a conventional keyboard.

Methods:

Using a prospective randomized protocol, 40 participants (physicians, nurses and medical students) performed a typing test on both a flat and conventional keyboard following a practice test. Results recorded were words per minute (WPM), accuracy, and error correction rates. Accuracy was defined by the percentage of correctly typed characters. The impact of the two different keyboards on clinical documentation was determined by measuring the number of typed words for every patient admitted to the urology service for 30 days. The one month data for word count, accuracy and speed were then extrapolated to a one year interval to project differences between keyboards.

Results:

Subjects typed significantly faster using the conventional keyboard compared to the flat keyboard (58 v 50 WPM; $p < 0.001$). Accuracy was significantly higher using the conventional compared to the flat keyboard (94.5 v 90%; $p = 0.024$). The percent error correction was similar (52% vs. 52%; $p = 0.31$). During the one-month study period, the urology service typed an average of 526 (43-9480) words for 67 patients, a total of 35,242 words. Applying word and error rates to a one-year period, using the conventional keyboard would save 17.7 hours and prevent 19,032 errors compared to the flat keyboard.

Conclusions:

Although “hygienic” flat keyboards may prevent the spread of infection including COVID-19, this study demonstrates that they are also associated with a 16% reduction in typing speed and a 5% increase in error rate.

If funding provided, type in source company / entity name(s):

None

111 Hypogonadism Presenting as Lifelong Asexuality Successfully Treated with Hormone Replacement Therapy

Maria Uloko MD¹, Farah Rahman MS², Irwin Goldstein MD¹

¹San Diego Sexual Medicine, San Diego, California, USA. ²Stritch School of Medicine, Chicago, Illinois, USA

Abstract

Introduction: Asexuality is defined as the lack of sexual attraction or attraction to others or low interest or intrinsic desire for sexual relationships. It is estimated that it affects roughly 1-4% of the population. Several hypotheses have been proposed as the asexuality ranging from environmental to biologic.

Method: We present a case of a woman with lifelong asexuality as a result of biologically mediated hypogonadism.

Case Report: A 45-year-old female with a prior medical history of depression, severe dysmenorrhea and menorrhagia presented to our clinic for evaluation of distressing lack of sexual attraction. Patient had identified as asexual for all of her life without distress. This was until she was started on Lupron, an LHRH analog, for management of her severe dysmenorrhea. Prior to this she had been on several treatments including over 30 years of oral contraceptives. She reported experiencing sexual desire for the first time in her life as a result of the reflexive testosterone surge associated with Lupron. This desire decreased over time causing significant distress at the loss of her newly discovered desire.

Patient underwent comprehensive neurogenital testing including sacral dermatome testing, genital quantitative sensory testing and bulbocavernosus reflex latency testing using electromyographic monitoring of the bulbocavernosus muscles which were grossly normal. Vulvoscopy showed provoked vulvodynia, vaginal atrophy and abnormal vaginal pH. Labs were significant for low testosterone (12 ng/dl), low free testosterone (0.2 ng/dl) low dihydrotestosterone (<5 ng/dl), low estradiol (31 pg/ml), elevated LH (23 mIU/ml) and elevated FSH (33.5 mIU/ml). She was started on systemic testosterone therapy, systemic estrogen, and vaginal estrogen and DHEA. Once her hormones were restored to physiologic levels, the patient had increased desire/libido with significant improvement in her quality of life.

Conclusion: Asexuality exists on a spectrum and while being asexual in and of itself is not a disorder, when it causes distress mental health experts view it in the context of a disorder. Consideration of biologic factors is important in patients distressed by their asexuality. Hormone replacement therapy is an effective treatment for asexuality related to hypogonadism.

If funding provided, type in source company / entity name(s):

San Diego Sexual Medicine

37 Occupation and urolithiasis in Qatar

Kamran Hassan Bhatti MS

HMC, AKH, QATAR, Qatar

Abstract

The role of occupation in urolithiasis is still controversial. Qatar is situated in western Asia (Middle East), due to its high temperature and semi-arid climate; high prevalence rate of urinary tract stones was documented in this part of Asia (6.8% to 19.1%). Qatar is geographically located in Urinary Stone Belt. Qatar workforce is made up of 100 different nationalities. Qataris constitute only 10% of the country's total population, followed by others as 13% Arabs, 21.8% Indian, 7.35% Filipino, 12.5% Nepali, 12.5% Bangladeshi, 9.35% Egyptians and 4.35% Sri Lankan. This study is intended to explore more risk factors of urolithiasis due to occupational hazards in Qatar's population.

Method; After ethical approval by IRB.

Retrospective study of 2000 patients with urinary stones admitted for treatment in our center Jan 2014 to December 2019.

Results;

There were 1645 (82.25%) males and 355 (17.75%) females respectively. Their mean age was 42 years.

There were senior officials and managers 2.50%, professionals 3.50%, technicians and associate professionals 6.30%, clerks 7.09%, sales and service workers and proprietors 8.8%, skilled agricultural and fishery workers 12.4%, craft and related workers 16.76%, plant and machine operators and assemblers 21%, elementary workers 21.3% and not identified 1.5%. In Qatar Labor Force Survey Annual Report - 2019 by census and statistics department shows the normal distribution of population and labor force as follows. Craft and trade workers 32%, elementary occupation 18%, plant and mechanical operators 15%, services and sales 9%,

professionals 8%, technicians 7%, clerks 4%,

senior officials 2%.

CONCLUSION

In conclusion, employees, elementary workers, plant and machine operators and drivers have higher risk of urolithiasis compared to others. The outdoor workers are more susceptible in developing urolithiasis compared to indoor workers. The risk factors assumed are low water intake, excessive perspiration and occupational stress. Further studies should be conducted to establish the exact risk factors for urolithiasis among these outdoor workers, in order to control them for preventing urolithiasis. Furthermore, this study confirms that men are at a higher risk of forming urinary stones compared to women which is similar to existing literature.

Source of funding . nil

Poster Session 6 Lumasiran Demonstrated Comparable Oxalate Reduction and Safety in Children and Adults with Primary Hyperoxaluria Type 1

Hadas Shasha-Lavsky MD¹, Sander J Garrelfs MD², David J Sas DO³, John C Lieske MD³, Taylor Ngo MPH⁴, Nune Makarova MD, MPH⁴, John M Gansner MD, PhD⁴, Tracy L McGregor MD⁴, Yaacov Frishberg MD⁵, [Eric D Bizjak PharmD⁴](#)

¹Galilee Medical Center, Nahariya, -, Israel. ²Emma Children's Hospital, University of Amsterdam, Amsterdam, -, Netherlands. ³Mayo Clinic, Rochester, MN, USA. ⁴Alnylam Pharmaceuticals, Cambridge, MA, USA. ⁵Shaare Zedek Medical Center, Jerusalem, -, Israel

Abstract

Objectives

Lumasiran is a subcutaneously administered RNAi therapeutic indicated for the treatment of primary hyperoxaluria type 1 (PH1) in all age groups. Here we compare the efficacy and safety of lumasiran in children versus adults with PH1 using pooled data from two Phase 3 studies (ILLUMINATE-A and ILLUMINATE-B).

Methods

Pooled efficacy and safety data from ILLUMINATE-A and ILLUMINATE-B, including urinary oxalate, plasma oxalate, and eGFR were assessed by age <18 (N=40) or ≥18 years (N=17). Analysis included all available data from 57 patients with PH1, aged 4 months to 60 years, who completed the initial 6 months of lumasiran.

Results

During the initial 6 months of lumasiran, patients had a rapid and sustained decrease in urinary oxalate. Overall mean (SEM) percent reduction in urinary oxalate:creatinine ratios, measured in random spot urine samples from baseline to Month 6, was 63.1% (2.6) (N=54). A similar time course and magnitude of reduction occurred in patients <18 years (64.5% [3.3] [N=38]) and ≥18 years (59.8% [4.4] [N=16]). Oxalate reductions observed in random spot urine samples were comparable to those from 24-hour urine collections. Overall mean (SEM) percent reduction in urinary oxalate excretion from 24-hour collections was 63.8% (2.6) (N=40); 63.2% (3.5) in patients <18 (N=23); and 64.8% (3.9) in patients ≥18 years (N=17). Overall mean (SEM) percent reduction in plasma oxalate from baseline to Month 6 was 39.5% (3.7) (N=44), with similar reductions in patients <18 and ≥18 years. eGFR remained stable in both age groups during treatment. Cumulative exposure was 27.1 patient-years (N=57). Adverse events (AEs) were reported in 86% of patients; all were mild or moderate in severity. The most common AEs related to lumasiran were mild, transient injection-site reactions, experienced by 30% of all patients. No treatment interruptions or discontinuations related to lumasiran or deaths occurred.

Conclusions

Lumasiran reduced urinary and plasma oxalate to a similar degree in pediatric and adult patients with PH1 from the Phase 3 studies ILLUMINATE-A and ILLUMINATE-B. Urinary oxalate reductions were similar between random spot urine samples and valid 24-hour urine collections. Safety was comparable between pediatric and adult patients.

If funding provided, type in source company / entity name(s):

Alnylam Pharmaceuticals (Cambridge, MA, US)

Poster Session 6 Effect of Lumasiran on Kidney Stones and Nephrocalcinosis in Patients with Primary Hyperoxaluria Type 1

John C Lieske MD¹, Sander J Garrelfs MD², Mini Michael MD, FRACP, MMed³, Jeffrey M Saland MD, MSCR⁴, David J Sas DO¹, Taylor Ngo MPH⁵, John M Gansner MD, PhD⁵, Tracy L McGregor MD⁵, Yaacov Frishberg MD⁶, [Eric D Bizjak PharmD⁵](#)

¹Mayo Clinic, Rochester, MN, USA. ²Emma Children's Hospital, University of Amsterdam, Amsterdam, -, Netherlands. ³Texas Children's Hospital/Baylor College of Medicine, Houston, TX, USA. ⁴Icahn School of Medicine at Mount Sinai, New York, NY, USA. ⁵Anylam Pharmaceuticals, Cambridge, MA, USA. ⁶Shaare Zedek Medical Center, Jerusalem, -, Israel

Abstract

Objectives

Lumasiran is an RNAi therapeutic indicated for the treatment of primary hyperoxaluria type 1 (PH1) to lower urinary oxalate levels in pediatric and adult patients. We evaluated the effect of lumasiran on kidney stones and medullary nephrocalcinosis (NC) in patients with PH1.

Methods

In a Phase 1/2 trial of lumasiran and its Phase 2 open-label extension (OLE) (20 patients with PH1 \geq 6 years old), kidney stone-related adverse events (AEs) were reported. In the Phase 3 ILLUMINATE-A and ILLUMINATE-B trials, kidney stone event (KSE) rates and medullary NC grade were exploratory endpoints.

Results

In the Phase 1/2 trial, 6/20 patients reported \geq 1 kidney stone for the 12 months (M) prior to consent; during the trial, 4/20 patients reported \geq 1 kidney stone-related AE with lumasiran treatment (duration of follow-up: 7.8 person-years). After continuing to the Phase 2 OLE, 0/20 patients reported kidney stone-related AEs (duration of follow-up: 26.4 person-years). In ILLUMINATE-A, KSE rates per person-year (95% CI) in patients initially treated with lumasiran were 3.19 (2.57-3.96) during the 12M prior to consent, 1.09 (0.63-1.88) through the first 6M of lumasiran, and 0.85 (0.46-1.58) from M6 through M12. In placebo-crossover patients, KSE rates were 0.54 (0.26-1.13) during the 12M prior to consent, 0.66 (0.25-1.76) through the first 6M of the study with placebo, and 0.17 (0.02-1.18) during the first 6M of lumasiran. In ILLUMINATE-B, KSE rates were 0.24 (0.09-0.63) during the 12M prior to consent and 0.24 (0.06-0.96) through the first 6M of lumasiran.

In ILLUMINATE-A, NC grade improved in 3/22 and 0/12 patients receiving lumasiran versus placebo, respectively, at M6. NC grade worsened in 0/22 and 1/12 patients, respectively. In ILLUMINATE-B, after 6M of lumasiran treatment, NC improved in 8/18 patients and remained stable in 10/18; no patients worsened.

Conclusions

The apparent reduction in kidney stone-related AEs in the Phase 2 OLE and KSE rates in ILLUMINATE-A, and the improvements in NC grade observed in ILLUMINATE-A and ILLUMINATE-B with lumasiran are encouraging. Longer-term data on kidney stones and NC continue to be collected and will be presented.

If funding provided, type in source company / entity name(s):

Anylam Pharmaceuticals (Cambridge, MA, US)