

procedures within a post treatment 180-day follow-up period was analyzed by quartile. A nested case-control study was also performed.

**Results:** 1,259 patients were eligible for final analyses. During 3,980 person-years follow-up, 167 patients had recurrent urolithiasis needed for surgical intervention. From first to fourth quartile of drug exposure, recurrence rates were 45.64, 47.19, 43.11, and 18.52 per 1,000 person-years. The adjusted hazard ratio was 0.46 (95% CI = 0.24 to 0.89) for the fourth quartile (vs. quartile 1). In the nested case-control study, adjusted ORs were 0.23 (95% CI = 0.10 to 0.53) in the fourth quartile (vs. quartile 1).

**Conclusion:** Use of  $\alpha$ -blockers for 180 days or more decrease the risk of recurrent urolithiasis needed for surgical intervention. In patients at higher risk of recurrent urolithiasis, long term prescription of  $\alpha$ -blockers might help them prevent further surgical intervention.

### PD3-5:

#### WILL THE RISKS OF POSTOPERATIVE INFECTION BE INCREASED AFTER URETEROSCOPIC LITHOTRIPSY FOR PATIENTS WITH MILD PYURIA BEFORE THE OPERATION?

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**Purpose:** We evaluated whether the risks of postoperative infection will be increased in patients with mild pyuria before ureteroscopic lithotripsy (URSL) in a prospective study.

**Materials and Methods:** We prospectively enrolled patients receiving URSL from 2011/5 to 2015/2. The patients with normal urine routine (sediment WBC  $\leq$ 5/HPF) before URSL were assigned as control, and those with mild pyuria (sediment 5/HPF < WBC  $\leq$ 50/HPF) as experimental group. Febrile UTI, patients < 18 years, pregnant, and urine sediment WBC > 50/HPF were excluded. All patients received same protocol of preoperative and postoperative antibiotics. Pre-, intra-operative, and post-operative urine routine and culture were collected. Peri-operative data were compared. Post-operative pyuria, febrile episodes, and percentage of emergency room visits were also compared.

**Results:** 140 patients were enrolled (experimental: 53, control: 87). Mean age was 56.6 and 55.5 years, respectively. Patient's BMI, stone laterality, stone location, and percentage of male patients were similar in both groups. The mean stone size was 0.84cm vs. 0.76cm ( $p = 0.243$ ). The operation duration was 58.8 vs. 49.2 min ( $p = 0.022$ ). The stone free rate was 92.5% vs. 90.8% ( $p = 0.235$ ). Four out of 23 patients in experimental group had positive pre-operative urine culture, two were E Coli, and two Gram positive coccus. Two out of 12 patient in control group had positive pre-operative urine culture, one was E. Coli and one was coagulase negative staphylococcus group. Two out of 33 patients had positive intra-operative urine culture in experimental group: one pseudomonas, one enterococcus species. One out of 46 patients had positive intra-operative urine culture which was enterococcus species. Both pre-operative culture and intra-operative culture didn't reach statistical significance ( $p = 0.398$ , 0.477 respectively). Two patients (3.8%) in the experiment group and none in control group had post-operative fever but didn't reach statistical significance ( $p = 0.068$ ).

**Conclusion:** The incidence of postoperative fever increased in patients with mild pyuria before URSL but didn't reach significance compared to patients with sterile urine.

### PD3-6:

#### CLINICAL ANALYSIS OF 48 HOURS EMERGENCY DEPARTMENT VISIT POST OUTPATIENT EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY FOR UROLITHIASIS

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**Purpose:** To assess the safety of outpatient extracorporeal shock wave lithotripsy (ESWL) in the management of patients with renal and ureteral stones.

**Materials and Methods:** Between February 2012 and November 2014, 844 outpatients were treated with Outpatient ESWL at Taipei Veterans General Hospital. 22 patients visited emergency department (ED) within 48 hours. Stone size, stone shape (long to short axis ratio), location, total pulse of shockwaves, stone management and urine analysis data and date before ESWL, complications and treatment at ER and admission rate was investigated. Chi-Square and Logistic Regression analyses were used, with  $p < 0.05$  set as the level of significance.

**Results:** Of the 844 initial consecutive patients who underwent ESWL, 1095 times of ESWL was performed totally. There were 22(2%) patients visited ED within 48 hours after ESWL. Mean Age was  $54.3 \pm 12.6$  years old; BMI was  $25.9 \pm 3.2$ ; pre-ESWL Cr was  $0.89 \pm 2.54$  mg/ml; post-ESWL Cr was  $1.04 \pm 0.23$  mg/ml; stone height/width ratio was  $1.80 \pm 0.57$ . The mean renal stone size was  $12.2 \pm 5.9$  mm;. The mean ureteral stone size was  $6.1 \pm 0.2$  mm. 8 (8/379 = 2.1%) patients had right side stone, 14 (14/465 = 3.0%) patients had left side stones. 16 patients received ESWL for renal stone, 5 patients for ureter stone and 1 patient for both. The most common complication was flank pain include 16 patients (72.7%). Other complication includes hematuria (5 patients, all from renal stone), fever (4 patients, all from renal stone), acute urinary retention and nausea with vomiting (1 patient each). There were 12 patient received EWSL, PCNL, or URSL before. In 22 patient back to ER, 7 patients admitted to ward and 1 patient back to ER twice continuously. All patients received medical treatment without ESWL or surgical management.

**Conclusion:** The 48 hours Emergency Department Visiting rate was 2%. There was no severe morbidity or mortality case. The tendency risk factors according to our study include renal stone, large stone height/width ratio, pre-ESWL stone management. The conclusion showed the outpatient ESWL is safe for treating renal and ureteral stones.

### Podium-4

#### Oncology

##### PD4-1:

#### THE MOST IDEAL GUIDELINES FOR PERFORMING BONE SCANS IN PROSTATE CANCER STAGING IN TAIWAN

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**Purpose:** The necessity of bone scans in newly diagnosed prostate cancer patients is still a matter of debate. We attempt to evaluate the validity of currently published guidelines by analyzing bone scan results in newly diagnosed prostate cancer (PCa) patients to determine the optimal staging strategies.

**Materials and Methods:** Between January 2011 and July 2014, there were 362 consecutive newly diagnosed PCa patients at Kaohsiung Medical University Hospital. Bone scans were performed for all patients at initial staging. Patients positive for bone metastasis were characterized at diagnosis in terms of age, prostate-specific antigen (PSA) level, Gleason score (GS), and clinical stage. We analyzed the sensitivity and specificity of the American Urological Association (AUA) best practice policy, European Association of Urology guidelines, National Comprehensive Cancer Network guidelines, and the classification and regression tree by Briganti et al. for diagnostic performance in predicting bone metastasis.

**Results:** A total 73 of 362 (20.2%) patients were diagnosed with bone metastasis. Patients positive for metastasis on bone scans had significantly higher PSA levels ( $943.6 \pm 2198.4$  ng/mL vs.  $56.1 \pm 183.1$  ng/mL;  $p < 0.001$ ) and higher GSs ( $8.5 \pm 1.0$  vs.  $7.0 \pm 1.6$ ;  $p < 0.001$ ) than those with negative bone scan results. Pairwise comparisons in receiver operating curve