

## PP-097

### **Shock wave lithotripsy (SWL) for urinary stone disease in the pediatric age group: A single center experience**

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**Aims and Objective:** To evaluate the efficacy and safety of shock wave lithotripsy (SWL) for urinary stone disease in the pediatric age group.

**Material and Methods:** Between 2002 and 2012, a total of 90 children with 94 Stones in the upper urinary tract at different locations were treated by SWL. Diagnosis of their urinary calculi was established either by the use of plain X-ray & intravenous urography, or CT scan. All children were treated under general anesthesia with adequate gonads shielding using lead apron. Stone localization mainly done by ultrasound and or fluoroscopy. Plain X ray KUB was taken on next day of treatment to confirm fragmentation. Success rate was defined as clearance of calculi at one month follow up.

**Results:** A total of 70 boys and 20 girls with age range from 7 months to 15 yrs with mean was  $4.21 \pm 3.4$  yrs were treated. The most common presentation of stone disease was hematuria. The stones were located in the kidney in 84 (89.36%) patients of which 51 were (54.25%) in pelvis, 7 (7.4%) in upper calyx, 7 (7.4%) in middle calyx, and lower calyx in 18 (19.14%) patients while in upper ureter, 9 (9.5%) & lower ureter 1 (0.1%). The average stone size was  $10.04 \pm 3.6$  mm for renal calculi and  $10.16 \pm 3.62$  mm for ureteric stones. The average Hounsfield unit of stone was  $849 \pm 320$  HU. The average number of shocks required was  $983 \pm 366$  in renal calculi &  $961 \pm 364$  in ureteric stones. The overall success rate was 96% for renal calculi and 90% for ureteral calculi. The auxiliary procedures were required in the form of Booster ESWL in two patient, PCNL in one patient and URS in one. No serious complications were recorded in our patients. Minor complications occurred in the form of steinstrasse in five patient (Clavien grade I) & fever (Clavien grade I) in one patient that was managed conservatively.

**Conclusion:** SWL in pediatric age group for both renal and ureteral stone is effective, safe with minimal morbidity and re-treatment rate.

As published in the *Supplement of AFJU, Volume 18 (2012), 1<sup>st</sup> ESD "Experts in Stone Disease" Conference* (pages 67-68)