

**PP03****Extracorporeal shockwave lithotripsy in children. Single center experience**N. Iqbal¹, W. Zafar², J. Faiz²¹ Shifa International Hospital, Islamabad, Pakistan² Bahria University, Medical and Dental College, Karachi, Pakistan

Introduction: Urolithiasis is an ancient disease with global distribution and is an important health problem all over the world. There has been continued evolution of stone treatment modalities, such as endourologic procedures, open surgery and shock wave lithotripsy over the past few years. ESWL in pediatric age group for both renal and ureteral stone is cost effective; safe with an acceptable re-treatment rate. ESWL is effective for stones in all locations. ESWL has shown highly satisfactory stone-free rates and negligible complications. ESWL is recommended as effective treatment for stones less than 2.0 cm in all caliceal locations. We hereby share our experience of pediatric urolithiasis managed by ESWL in a group of 25 patients.

Materials and Methods: It's an observational study of 81 children who underwent ESWL from January 2010 to January 2014. ESWL was done by standard technique. We used Modulith SL X lithotripter 4th generation Storz medical in which electromagnetic cylindrical coil technology is used focused through a parabolic reflector. We included patients with stone burden <2cm without stent and >2cm with stent. We use power, energy level 5 -7 for kidney and 7-9 for ureteric stones. Number of shocks per session 3500 for kidney and 4000 for ureter. The energy is ramped up from 5 level according to fragmentation. Rate of shock wave delivery is 90 shocks/minute good coupling of the lithotripter to the patient is done. Focal zone of 7 mm (narrow focus) is used. Intravenous sedation (IV Nalbin 10 mg with Maxalon 10 mg for adults, Dormicum 2-3 mg to relieve anxiety. General anesthesia for children under 10 years).

The patients were analyzed for age, gender, stone size, site, operative time, stone clearance, hospital stay and need for DJ stent. Data was collected by chart review on specified proforma. SPSS ver16 was used for data analysis.

Results: Total of 81 children with mean age of 8.09±4.13 years. 56(69.1%) patients were male whereas 25(30.9%) patients were female. Mean stone size was 1.08± 0.59cm. Mean number of stones was 1.33±0.65 in these patients. Location of stones in Upper pole 6(7.4%) patients, mid pole 11(13.6%) patients, lower pole 23(28.4%) patients, PUJ 8(9.9%) patients and in renal pelvis 20(24.7%) patients, in upper ureter 10(12.3%), in all poles in 1 patient(1.2%) and in renal pelvis+lower pole in (1.2%) 1 patient.

60(74.1%) patients had one stone, 13(16%) patients had 2 stones, 5(6.2%) patients and only one(1.2%) patient had 4 stones at first session. In ancillary procedures Pre ESWL DJ stent was used in 26(32.1%) patients. Only one session was required in 59 patients(72.8%), Second session was required in 19 (23.5%) patients and third session was required in 3 (3.7%) patients.

Mean number of shock waves given were 3012.82±683.25. Post ESWL stone clearance was 86.60±1.32%.

No complication was seen in 59(72.8%) patients, Sepsis was seen in 4(4.9%), Stein strausse in 2(2.5%) patients, Hematuria in 6(8.6%) patients, Mild fever in 2(2.5%) patients and Flank pain in 7(7.8%). While Hemoptysis, Renal parenchymal lesion was seen in none of them. None had urethral obstructing stone.

Conclusion: ESWL is a safe and effective way of treating urinary tract stones in pediatric population.