

Management of Urinary Stone Disease with ESWL: Experience of 3 Years with 24286 Treatments

Introduction and Objective: To state the effectiveness of current EAU Guidelines on extracorporeal shock waves lithotripsy as a treatment for urinary stones after 3 years of experience and 24442 treatments done with the mobile stone clinic.

Materials and Methods: The mobile stone clinic was established in 1992. This clinic is run jointly by a Urologist, an Engineer and a Radiologist and uses a Wolf Piezolith 3000. From Jan 2008 to August 2011, all the new patients receiving the indication to treat their urinary stones with ESWL, following EAU Guidelines, were enrolled. The treatment was on kidney, ureteric or bladder stones. These patients after treatment were followed with abdomen X-ray and Urinary US performed by a Radiologist who was not involved in the treatment. If the stones treated were no more observed in the follow up imaging the patient was considered stone free. When a partial treatment was observed a new ESWL, if indicated, was prescribed. Complications of stone disease were documented during the follow-up period.

Results: There were 13168 patients treated and followed in the mobile stone clinic for 3 years for an overall number of 24286 treatments. A total of 10508 had a stone on the right side and 13309 on the left side, 468 had bladder stone. The success rate on the first treatment was 71.68% and mainly on the distal ureter (81.3%). Success rate for upper, middle and lower calyx were high and evidenced no statistical difference (70.7%, 70.1% and 70.9%) Men were more affected (64%). The mean shock waves were 3358 for treatment. The worst success rate was for renal pelvis stones (63.4 %).

Conclusions: This study reports the biggest ESWL case study to our knowledge. Besides the European Guidelines on urinary stones treatment this study underlines how ESWL can reach better results on the distal ureter. On upper, middle and lower calyx there is no difference.