Extracorporeal Shock Wave Lithotripsy success rate for upper and lower ureteric stones in Azadi-teaching (Dohuk) hospital in Kurdistan Region-Iraq
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Abstract

Background: Urolithiasis is a common health problem in our society. Extracorporeal Shock Wave Lithotripsy has been practiced successfully for treating renal and upper ureteric stones. Few studies, however, have looked on its effectiveness in the treatment of lower ureteric stone.

Objective: To evaluate the effectiveness of ESWL in the management of upper and lower ureteric stones in Duhok.

Patients and Methods: The study was planned and conducted from January 2013 to June 2014 on 294 patients (16-80 years) with ureteric calculi admitted for the initial Extracorporeal Shock Wave Lithotripsy treatment. All patients were underwent lithotripsy with shock wave 1220 to 4000 at the rate of 60-90 impulses per minute in the same place using the Siemens lithotripter. The outcome was evaluated on the 3rd and 7th days by x-ray and ultrasound and a second Extracorporeal Shock Wave Lithotripsy session was conducted for those have an incomplete clearance of ureteric stone.

Results: Out of the 294 patients, 74.1% were male, 55.8% had left-sided stone and remaining 44.2% had right-sided stone, and 34.4% had stone located in lower ureter. The mean age of the patients was 37.2 (±10.9) years, while the mean stone size was 7.98 (±1.18) mm. The Extracorporeal Shock Wave Lithotripsy has successfully removed the stone from 256 (87.1%) patients and the success rate was significantly higher for lower ureteric and small size stones. The success rate for both sides and genders were comparable in the study. Out of the rest 38 (12.9%) patients who did not obtain the success of stone minimization from the first Extracorporeal Shock Wave Lithotripsy session; 33 of them had stone clearance in the second session while, the rest of 5 patients need surgical intervention. Univariate logistic regression showed that small stone size was the only significant predictor for stone clearance after the first session.

Conclusion: The current study confirmed that the Extracorporeal Shock Wave Lithotripsy technique is the safe and effective method for upper and lower ureteral calculi comminution.

Key words: Extracorporeal shock Wave lithotripsy (ESWL), Lithotripsy, Ureteral calculi, Urolithiasis.

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