

Original Paper

Comparison of distal ureter stones treatment with extracorporeal shock wave lithotripsy and transurethral lithotripsy techniques

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Abstract

Background and Objective: Lower ureter is the most common site of stone trapped causing renal colic and hydronephrosis. If medical therapy is not effective, the treatment consists of extracorporeal shock wave lithotripsy (ESWL), transurethral lithotripsy (TUL) or on rare cases, open surgery. This study was done to compare the ESWL with TUL in sixty patients with lower ureteral stones which did not respond to therapeutic regimen.

Materials and Methods: This prospective cohort study was done on sixty patients with obstructive lower ureteral stones for more than 3 weeks, that have not been responded to the therapeutic regimen in Imam Reza hospital, Mashhad, Iran during 2004-06. According to treatment indications sixty patients divided in two equal ESWL and TUL groups. Success of procedure were evaluated by ultrasonography and KUB radiography. The success rate of two different techniques and the side effects in each patient was recorded.

Results: In ESWL group in 14 patients (46.66%) the stone was broken and its particles were removed but in 13 patients (43.33%) the stone was not broken and they became candidates for TUL. In 3 patients (10%) the stone was broken but the particles did not pass. The only complication of ESWL was renal colic which was in 15 patients (50%) and cured by medical treatment. In TUL group, in 93.5% of patients, the stone was broken and particles were removed, but in 6.5% the procedure was not successful and the patients underwent ESWL or open surgery. 10% of patients experienced fever and colic pain, who underwent medical treatment.

Conclusion: This study showed that TUL technique has higher successful rate than ESWL technique in lower ureteral stones.

Keywords: TUL, ESWL, Ureteral stone, Ultrasonography

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