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Long-term experience on ESWL of a single Stone Center

D. De Carolis, G. Barbieri, A. Avolio, F. Marconi, A. Florio

Ospedale Provinciale, Ascoli Piceno, Italy

Introduction: Urolithiasis is an important chapter in the urological pathology, due to its high incidence, frequency of recurrence and complications it might cause. There are many methods of treatment for urinary stones and Extracorporeal Shock Wave Lithotripsy (ESWL) results as one of the main efficient method. In this study, we analyze how the therapeutic tactics of the urolithiasis have changed in a single reference center for ESWL.

Patients and Methods: Between April 1994 and December 2011, 855 patients, diagnosed with reno-ureteral lithiasis, underwent a total of 2263 procedures. Indication for ESWL treatment, outcome-rate of success, number of failures, and complications were retrospectively evaluated. The patients have been treated by using a single third generation electrohydraulic lithotripter (LITHORING, multi-one, Medas, Genoa, Italy). The treatments are made in 87% of cases by the same physician operating on the machine since 1994.

Results: The study shows an overall success rate of the first five years of 73.9 %, with an improving trend over the following years. The indication for the ESWL therapy changed after the application of endourologic procedures such as ureteroscopy and percutaneous nephrolithotomy. The overall complications rate of the first five years (3.6%) fell to 1.7% during the last five years. Better selection of the patients and optimal use of the machine contributed to it.

Conclusions: ESWL remains the first choice therapy for renal stones smaller than 2 cm; and double J stenting is suitable for obstructing stones. Ureteral stones are unusually treated with ESWL because ureteroscopic procedures are applied more frequently. Fixed lithotripters are efficient either for a prompt application of the treatment and for the availability of ultrasound and radiosopic equipments used as guidance in different conditions.

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