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Introduction & Objectives: Ureteroscopy is treatment chosen for the resolution of ureteral stones non-solvable with Extracorporeal Shock Wave Lithotripsy. Use of effective fragmentation tools as Holmium Lasers

3.0 and ballistic energy have simplified the surgical procedure. It is not uncommon that the Ureteroscopy is thwarted by the migration of the stone to remove or by inability to negotiate the ureteral lumen. We have gained experience in this procedure since 1985 and we describe the technique which provides the constant use of the hydrophilic guide called roadrunner wire as essential precondition for the Ureteroscopy.

Materials & Methods: Specific composition of the guide, provided with a platinum tip and the upholstery of thinnest hydrophilic polymeric material allows to attract other liquids towards the guide wire creating a low friction surface. This quality allows to overcome the obstacle of kidney stone and to conduct the operation avoiding push up and lack of progress. Length of the Guide is 145 cm and diameter of 0.035-0.038 inches. We were able to go beyond the mechanic obstacle of kidney stone with the lateralization of the Guide and then working with Holmium Laser 3.0 getting the complete Lithotripsy with the extraction of limestones with Dormia Basket zero tip. Treated patients showed calculus in the pelvic lumbar and pelvic-ureteric junction tracts. All of them had consensual hydronephrosis. In one case we found septic fever for 5 days. Size of calculi was between 0.8 \ 2.4 cm and they were made of calcium oxalate, calcium phosphate and uric acid. This group of 30 patients have been compared with another of 30 ones between 20-82 years previously treated in which the procedure were preventively made with ascending pyelography and the use of the Teflon or semirigid guide. Procedures have been carried out in each case with constant radiological control providing a complete graphic documentation for medical-legal aims.

Results: With the group of 30 patients (between 17-84 years) treated with hydrophilic road runner guide we got the 93,33% of the outcome (28/30 patients) making the patients free from kidney stones and only a minimum part of the surgical ones needed a double J stent (6/30(20%). We choose to let inside a catheter 6-7Ch usually removed after 24-36 hours. In the comparison group the patients free from stones were 23/30 with a lower percentage (76%).

Conclusions: Use of the ultrathin hydrophilic guide is expedient that simplifies the entrance and progress of the tool increases the negotiability of the ureter above all in the lumbar section, doesn't move the stone and allows to perform the surgery in complete safety. The Road Runner Guide also allows the alignment of the ureteral tract with kinking straightening and without risk to undermine the mucosa. Surgical duration (18 minutes on average) proves the efficacy of the guide.