

Active Guidewire Technique. A new way to approach endoscopic treatment for ureteral stones and tumors

Alessandro Calarco MD

Fondazione Policlinico Universitario A. Gemelli, Italy.

Abstract

Introduction: Growing of technological progress has led to a more frequent use of minimally invasive techniques like semirigid ureteroscopy and Retrograde IntraRenal Surgery (RIRS). All these operating techniques use irrigation for improve endoscopic vision and safety maneuvers to minimize the risk of complications. The keys are vision quality, low operating time and complications like sepsis, ureteral perforation, ureteral disruption, residual stone fragment, bleeding management. Most important safety maneuvers are the positioning of a safety guidewire, the use of low pressure and delicate advancement of the scope. During semirigid ureteroscopy the quality of vision is conditioned by the medium in which the camera is immersed. The cleaner the liquid is, the better we see and the better is the result. Semirigid scope does not have a continuous flow so we have to stop the treatment at repeated intervals, to discharge, every time the excretory route is filled up, avoiding excessive intrarenal pressure. This is very important for infections prevention.

Materials and methods: In this video we show the case of a 64-years-old female patient suffering from multiple left ureter stones for a total length of 2.5 cm treated with semirigid laser ureteroscopy with the active guidewire technique. The traditional safety guidewire will be replaced by a Pollack ureteral catheter (Cook Medical®) becoming an active, and no longer passive, element. This 5 ch catheter with a soft tip is positioned in place of the safety guide wire connecting renal pelvis with the outside giving us a continuous flow.

Results: With the Active Guidewire the quality of vision during laser lithotripsy is better, the generated powder is immediately expelled through the catheter thanks to the constant flow. Risk of ureter injury is lower. Having a continuous flow reduces surgical time. Decrease of intrarenal pressure gives a reduction of sepsis risk. Function of safety guidewire remains in case of emergency.

Biography:

Alessandro Calarco is a surgeon specializing in Urology. He obtained his specialization at the Catholic University of the Sacred Heart and subsequently perfected himself in endo-urological and scalpel-free surgery: his approach is always minimally invasive, trying to minimize the sacrifices associated with the interventions and allowing more healing, quick and uncomplicated. Born in Messina on 08/11/1982, he graduated in Medicine and Surgery from the Catholic University of the Sacred Heart in 2007. From that moment everything is in rapid evolution: in February 2008 he obtained the professional qualification and in March he began the School of Specialization in Urology, where he obtained the title of specialist in April 2013 with full marks..

Publication of speakers:

1. Alessandro Calarco MD : Preoperative Neutrophil/Lymphocyte ratio (NLR) as a prognosticator in Upper Tract Urothelial Carcinoma (UTUC) patients treated conservatively: A retrospective evaluation
2. Alessandro Calarco: Active Guidewire Technique. A new way to approach endoscopic treatment for ureteral stones and tumors

Citation: Alessandro Calarco, Active Guidewire Technique. A new way to approach endoscopic treatment for ureteral stones and tumors, Webinar on Renal Diseases and Management, March 16, 2021.