



# Micro-ureteroscopy for treatment of pelvic ureteral stone in pediatric patient

Diogo Nunes-Carneiro <sup>1</sup>, João Ferreira Cabral <sup>1</sup>, Avelino Fraga <sup>1</sup>, Vítor Cavadas <sup>1</sup>

<sup>1</sup> *Departamento de Urologia de Centro Hospitalar do Porto, Instituto de Ciências Biomédicas de Abel Salazar, Porto, Portugal*

## ABSTRACT

**Introduction:** During the last years there has been an effort in miniaturizing the endoscopic devices.

The video presents an alternative for the management of distal ureteral stone, using a ureteral access of 4.85 Fr and 27 cm of length, previously described as micro-ureteroscopy.

**Material and Methods:** This procedure was performed through a 3-part all-seeing needle, consisting of micro-optics 0.9 mm in diameter with a 120-degree angle of view, an irrigation channel and an integrated light.

**Clinical Case:** Seven year-old boy, with history of preterm birth (29 weeks) was referred to our consultation complaining of left back pain and an elevation of serum creatinine.

The renal ultrasound revealed a left ureterohydronephrosis, caused by a 10 mm stone located 13 mm from the ureterovesical junction.

The patient underwent a micro-ureteroscopy with laser lithotripsy. The stone was fragmented with an average energy of 0.5 J with 12 Hz of frequency. The total energy spent was 12514 J. At the end of the procedure, a double J stent was placed.

The procedure lasted 45 minutes and was uneventful. The patient was discharged 24h after the procedure without complaints and remained stone free.

**Conclusion:** Micro-ureteroscopy is a safe and effective technique in distal ureteral lithiasis treatment in children. The small dimensions of the equipment increase the safety of the procedure making this a good option for the treatment of ureteral stones in children.

## ARTICLE INFO

Available at: [http://www.int brazjurol.com.br/video-section/20180223\\_Nunes-Carneiro\\_et\\_al](http://www.int brazjurol.com.br/video-section/20180223_Nunes-Carneiro_et_al)  
Int Braz J Urol. 2018; 44 (Video #X): 639-639

Submitted for publication:  
March 26, 2018

Accepted after revision:  
August 12, 2018

Published as Ahead of Print:  
October 30, 2018

### Correspondence address:

Diogo Nunes-Carneiro, MD  
Departamento de Urologia  
do Centro Hospitalar do Porto  
Inst. de Ciências Biomédicas de Abel Salazar  
Porto, Portugal  
Largo Professor Abel Salazar, N° 1  
Porto, 4099-001, Portugal  
Telephone: + 351 91 3062-117  
E-mail: diogocarneiro.urologia@chporto.min-saude.pt