

Let's flex with a twist – Flexible percutaneous approach in special cases

Stefania Ferretti¹ , Pietro Granelli¹ , Davide Campobasso² , Francesco Dinale³ , Elisa Simonetti³ , Tommaso Bocchialini³ , Elisa Melani³ , Umberto Vittorio Maestroni³ 

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Introduction

We report 3 unusual cases of urolithiasis in urinary tract abnormalities managed by the use of reusable flexible ureteroscope (Storz, Germany) with retrograde or combined procedures.

Material and methods

A woman with retroperitoneal fibrosis and left nephrostomy tube and right ALLIUM stent for ureteral stenosis presented with left stones and complete encrustation of the ALLIUM stent. A retrograde approach was unsuccessful on the left. We performed a percutaneous access on the left with laser lithotripsy with a flexible ureteroscope. The right ALLIUM stent was removed with a retrograde approach after laser lithotripsy of the encrustation.

A woman with an ileal continent reservoir developed stones in both kidneys and in the reservoir. The Mitrofanoff conduit was inaccessible with flexible instruments. We chose an anterograde percutaneous access through the left kidney to allow progression of a flexible ureteroscope to the reservoir. With this access we reached the contralateral kidney, passing through the reservoir and obtaining a complete stone-free rate.

In a 7-year old girl with augmentation enterocystoplasty and Mitrofanoff conduit with a 1.5 cm stone in the left ureter, we carried out a combined approach to avoid fragment extractions through the Mitrofanoff.

Conclusion

The use of flexible instruments with retrograde or anterograde approach to treat urolithiasis is well known in endourology. With these 3 examples we wish to emphasize the wide adaptability of the instruments and of the two techniques to patients' anatomy, empowering the definitive management of complex cases. In selected cases the versatility of both the endourologist and the miniaturized and flexible instruments can allow novel and effective solutions.

Video see link: <https://doi.org/10.5152/tud.2020.20189>

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¹SS Endourology and Less Invasive Percutaneous Surgery, Urology OU, Hospital and University of Parma, Parma, Italy

²Urology Unit, Civil Hospital of Guastalla, Azienda USL-IRCCS di Reggio Emilia, Reggio Emilia, Italy

³Urology Unit, Hospital and University of Parma, Parma, Italy

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Corresponding Author:
Davide Campobasso
E-mail:
d.campobasso@virgilio.it

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