

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

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**Cite this article as:** Ferretti S, Granelli P, Campobasso D, Dinale F, Simonetti E, Bocchialini T, et al. Let's flex with a twist - Flexible percutaneous approach in special cases. Turk J Urol 2021; 47(1): 86.

## Keywords:

Endourology, flexible ureteroscopy, urolithiasis

## 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>

**Informed Consent:** Written informed consent was obtained from patients' who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept – S.F., D.C.; Design – S.F., D.C., F.D.; Supervision – P.G., U.V.M.; Resources – T.B.; Data Collection and/or Processing – T.B., E.S.; Analysis and/or Interpretation – S.F., D.C., P.G.; Literature Search – D.C., E.M.; Writing Manuscript – D.C.; Critical Review – S.F., P.G., U.V.M.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

**Financial Disclosure:** The authors declared that this study has received no financial support.

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**Submitted:**  
21.05.2020

**Accepted:**  
17.08.2020

**Available Online Date:**  
09.10.2020

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