

## VID-14

### Retrograde Intrarenal Surgery (RIRS) of a lower pole lithiasis and infundibular stenosis in a renal double collecting system

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**Introduction:** We present the technique of RIRS for the treatment of a lower pole stone associated with an infundibular stenosis in a double renal collecting system.

**Materials and Methods:** Patient is a 32-year-old woman with a complete left ureteral duplication, vesicoureteral reflux on the ureter draining the upper collecting system (Fig.1) and a lower pole calyx with a 18 x 12 mm stone and a stenotic infundibulum in the lower collecting system (Fig.2). Presenting symptoms were recurrent UTI and left flank pain. A flexible ureterorenoscopy (F-URS) was performed with a 5,3 Fr tip ureterorenoscope without an ureteral access sheath (Fig.3a,b). A holmium laser infundibulotomy and lithotripsy were performed leaving a JJ stent at the end of the procedure (Fig.3c). At 40 days a CT scan revealed multiple residual fragments (Fig4a), so a second look F-URS was scheduled. During the second procedure a 12/14 Fr ureteral access sheath and a 8,5 Fr tip videoendoscope were used. The calyceal infundibulum was substenotic (Fig.4b) so a laser incision was repeated. All residual stones were removed with a 1.3 Fr nitinol basket (Fig.4c,d).

**Results:** After the first procedure urosepsis occurred and was resolved with antibiotic treatment. The postoperative period of the second procedure was uneventful. At two months follow up the patient was stone free on a CT scan.

**Conclusions:** F-URS is a minimally invasive technique and can be used effectively in complex cases like in stone-bearing calyceal diverticula and urinary tract malformations. In such cases there is an increased risk of postoperative urosepsis, so using an ureteral access sheath may be useful in order to reduce the complication rate. In complex cases patients must be informed also about the probability of having to undergo more than one procedure.

Figure 1. Complete left double renal system with VUR on the upper system and lower calyceal lithiasis on the lower system

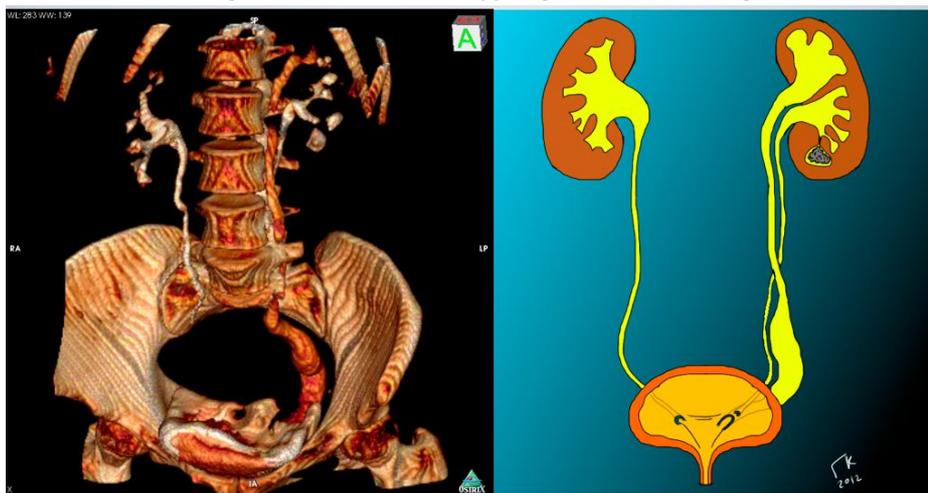


Figure 2. Stenotic infundibulum and stone of the lower pole calyx

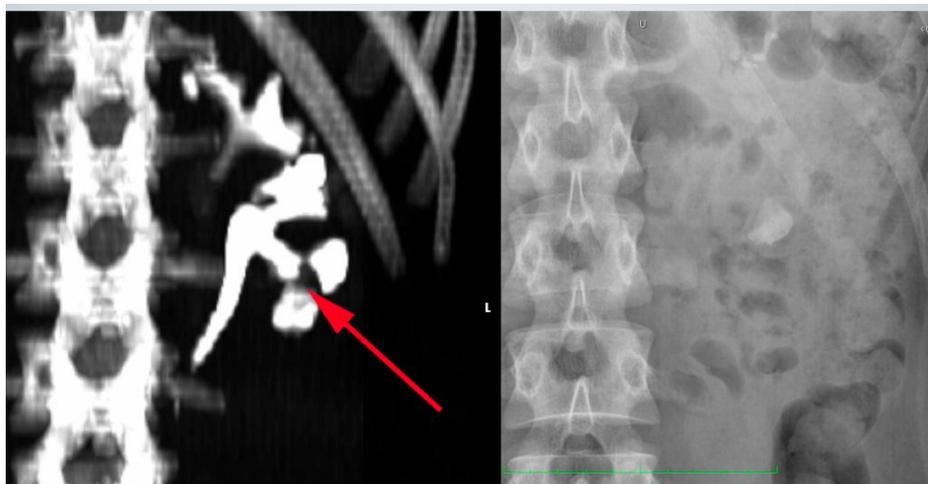
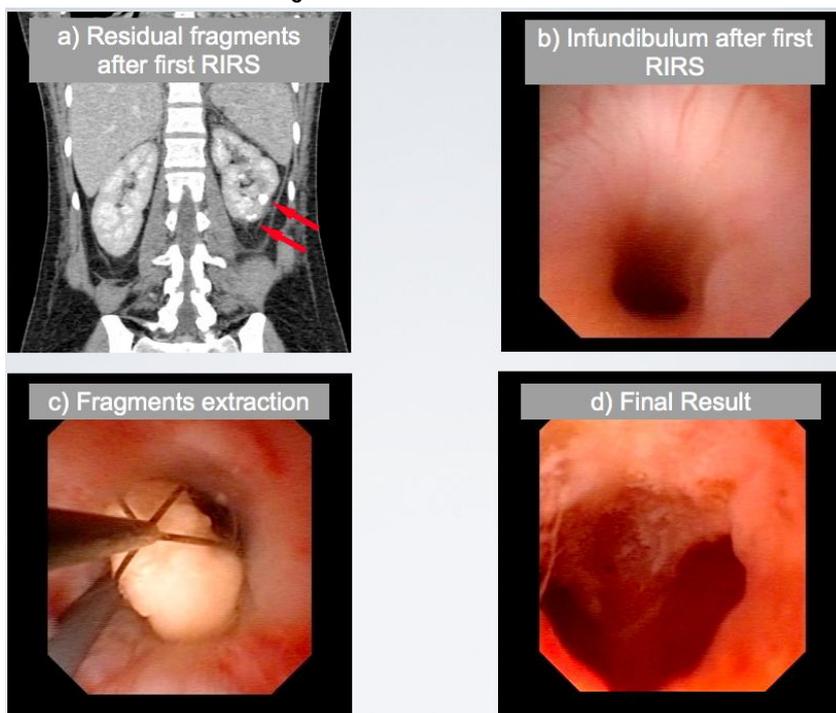


Figure 3. First flexible URS



Figure 4. Second flexible URS



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