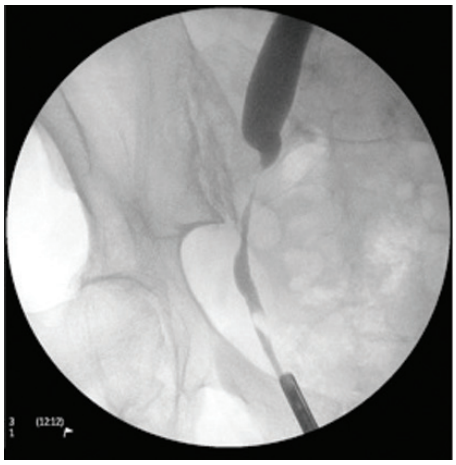
# Ureteric strictures

## Case 1



1. What is this investigation? What are the findings of this investigation?
2. What are the causes for this?
3. What are the treatment options?

## Case 2



1. What do these X-Ray KUB films show?
2. What are the complications of ureteric stents?
3. How can stent pain be minimised?

## Case 3



1. What do the X- Ray KUB images show?
2. What is this metallic device made of, and how does it work?
3. What are the advantages of this device over a standard ureteric stent?
4. What are the complications associated with this device?

# Ureteric strictures – answers

## Case 1

1. Retrograde ureterogram. A narrowing of the right ureter at the pelvic brim with proximal ureteric dilatation. An air bubble can also be seen within the lower ureter.
2. Latrogenic (instrumentation, pelvic surgery, radiotherapy), post impacted stone, extrinsic compression (malignancy, collection, lymph nodes, etc), retroperitoneal fibrosis, transitional cell tumours and trauma.
3. Endoscopic: ureteric stents (temporary or permanent with plastic or metallic stents), ureteric dilatation and ureteric incision. Reconstruction: depends on site and length of stricture. Options include ureteroureterostomy, transureteroureterostomy, re-implantation +/– psoas hitch and Boari flap. Nephrectomy: for a non-functioning kidney.

## Case 2

1. Image 1: Ureteric stent with stone formation in the bladder, mid ureter and renal pelvis. A left upper calyceal renal calculus.
   Image 2: Bilateral ureteric stents, right ureteric stent deviation secondary to retroperitoneal lymphadenopathy and part of an inferior vena cava (IVC) filter in-situ.
   This patient has metastatic testicular cancer with bulky retroperitoneal lymphadenopathy and deep vein thrombosis (DVT).
2. Stent pain (80%), encrustation, migration, fracture, occlusion and stone formation. Bladder storage and reflux symptoms, dysuria, haematuria and infection. Impairment of sexual and quality of life.
3. Avoid stents if possible and minimise duration. Analgesia, alpha-blockers or combined treatments (alpha-blockers / anti-cholinergics) are effective [1,2].

## Case 3

1. Image 1: Memokath in left mid-ureter plus left nephrostomy.
   Image 2: Memokath migration into bladder.
2. The Memokath is a thermo-expandable nickel-titanium alloy stent. It retains its normal shape at room temperature to allow placement in the ureter and expands when warmed to aid deployment.
3. Lower incidence of migration and occlusion, reduced tumour ingrowth, reduced bladder / renal irritation symptoms, long-term cost-effectiveness and low risk of encrustation.
4. Encrustation, migration, occlusion (debris, stone, matrix or tumour).

**References**


1. Lamb AD, Vowler SL Johnston R, et al. Meta-analysis showing the beneficial effect ofα-blockers on ureteric stent discomfort. *BJUI* 2011;**108(11)**:1894-902.
2. Lim KT, Kim YT, Lee TY, Park SY. Effects of tamsulosin, solifenacin, and combination therapy for the treatment of ureteral stent related discomfort. *Korean J Urol* 2011;**52(7)**:485-8.



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