

Ureteric reimplantations in rare  
unusual clinical situations done  
at Dr D Y Patil Hospital, Pune

# Case 1

- 14/Female, student
- Presented with chief complaints of :
  - Frequency, x6months
  - Urgency, x6months
  - Dysuria a/w suprapubic pain x6months
  - Intermittent fever x6months
  - 1-2 episodes of hematuria with Amorphous clots

- No other associated comorbidities
- No significant family history
- General, systemic, and local examination were unremarkable

# INVESTIGATIONS

- ❖ Hb – 10.4 mg/dL
- ❖ TLC – 6500/uL
- ❖ Plt - 320000/uL
- ❖ INR – 1.05
- ❖ BSL – 110 mg/dL
- ❖ Urea- 19 mg/dL
- ❖ Creatinine – 0.55 mg/dL
- ❖ Electrolytes 138/3.9 mmol/l

- ❖ Sr. Bilirubin –
  - T – 0.7 mg/dl
  - D/I - 0.2/0.5 mg/dl
- ❖ SGOT – 24 U/l
- ❖ SGPT – 18 U/l
- ❖ ALP – 68 U/l
- ❖ HIV – Non reactive
- ❖ HbsAg – Non reactive
- ❖ HCV – Non reactive

➤ **Urine (R/M) :**

- Appearance – clear
- Colour – Pale Yellow
- pH - 6
- Proteins – Present 1+
- Glucose - NIL
- Acetone - Nil
- Bile Pigments - Nil
- Urobilinogen - Nil

• **Microscopy**

- RBC - 1-2/hpf
- Pus cells - 30-40/hpf
- Epithelial cells - 1-2/hpf
- Casts nil
- Crystals nil

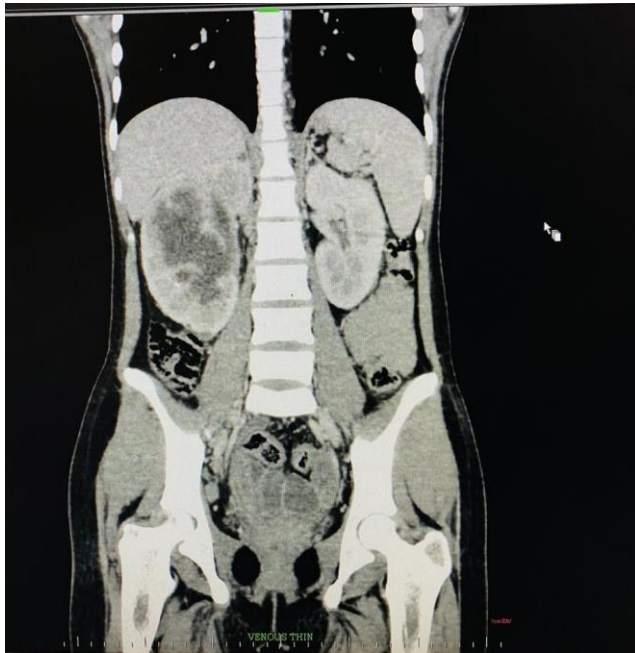
• **Urine C/S – No growth**

✓ **Urine for AFB – Negative**

✓ **Urine for TB PCR – Not detected**

# USG

- **Right Kidney** – 12.7\*5.5 cm. Mildly enlarged and mildly raised echogenecity. **CMD altered**. Moderate hydronephrosis with upper ureter dilatation uptil iliac crossing
- **Left Kidney** – 12\*5.2 cm. Mildly enlarged and mildly raised echogenecity. **CMD preserved**.
- **Urinary Bladder** – small capacity bladder approx.75ml with 10 ml post void residue with thickened bladder wall
- Rest of the usg was unremarkable



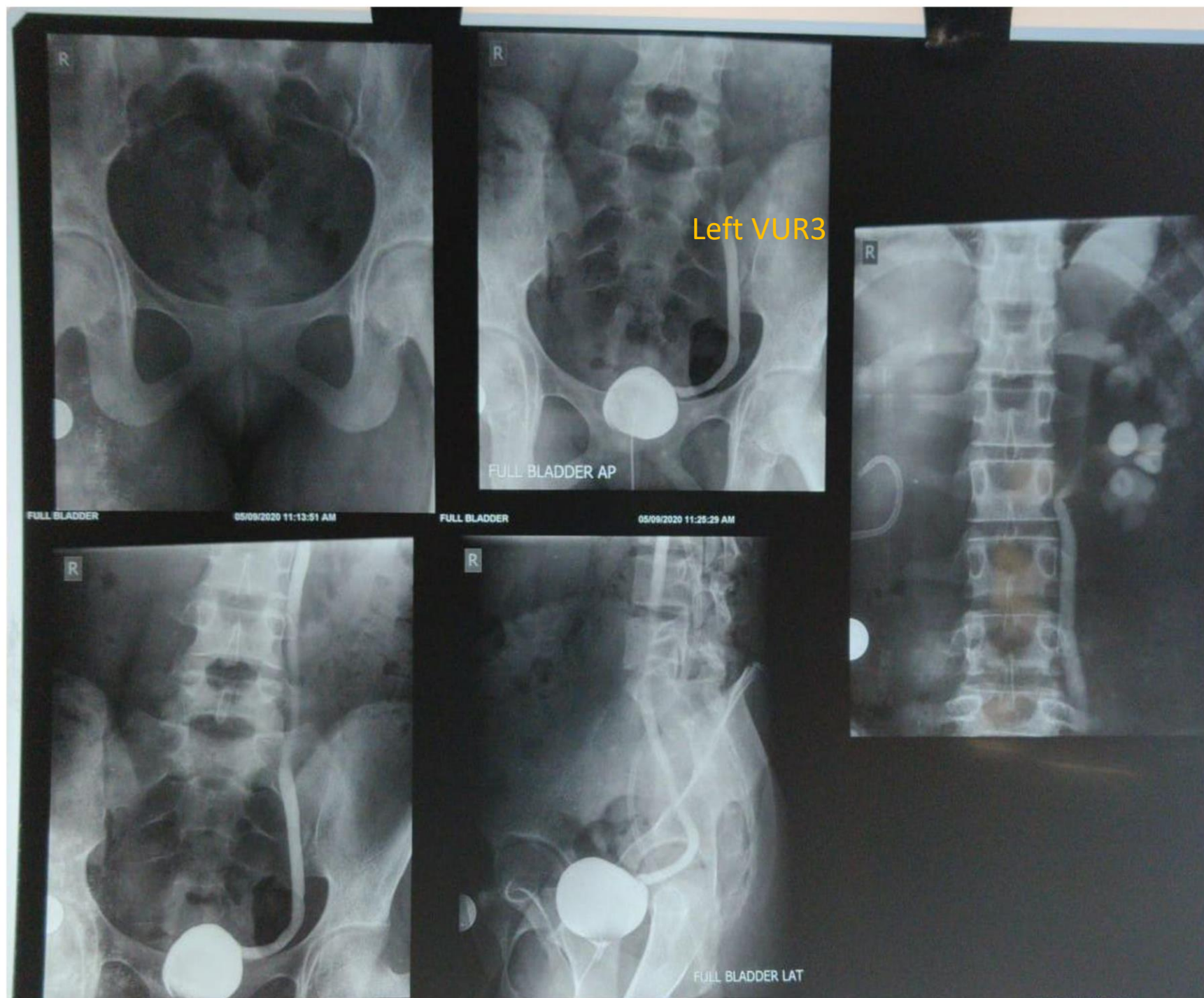
# CECT KUB/HRCT chest

- **Right Kidney:** Enlarged in size and measures- 13 x 6.5 cm. Moderate Right Hydronephrosis is seen. Generalised circumferential wall thickening of Right pelvis and upper ureter is seen with possible narrowing of middle and lower ureter
- **Left kidney:** Normal in size and measures 11.7 x 5.0 cm. No HN or HU seen on left side.
- Both kidneys normal in position. Excretion is seen in both kidneys on delayed phase image.
- Bladder wall appears thickened

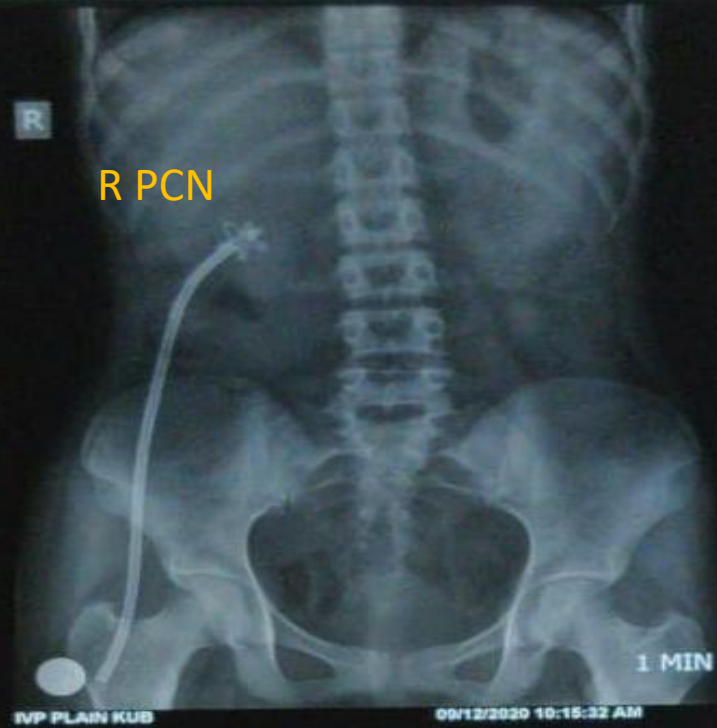


## MCU

- Evidence of reflux into left ureter, renal pelvis and calyces with moderate dilation of ureter. S/O **Grade 3 VUR**
- Abrupt narrowing noted at the Left UV junction.
- Small capacity bladder seen



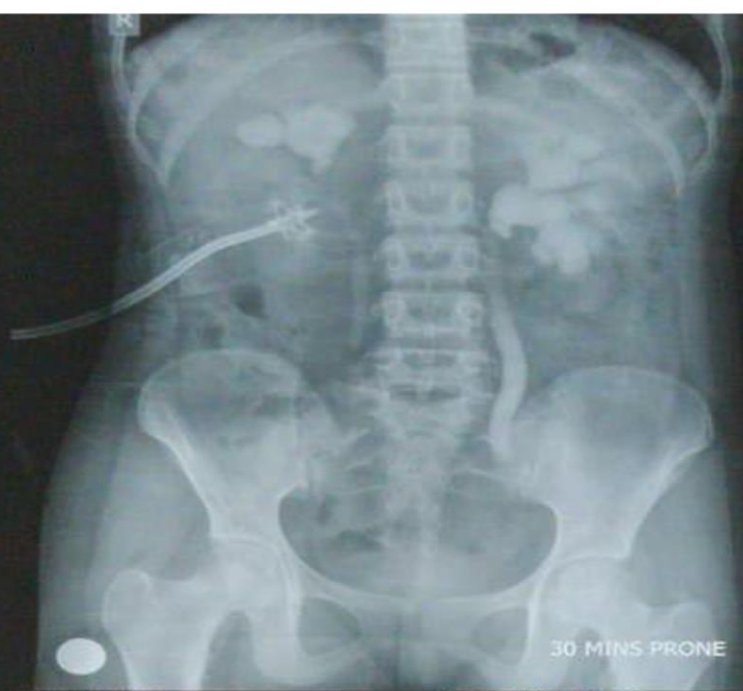




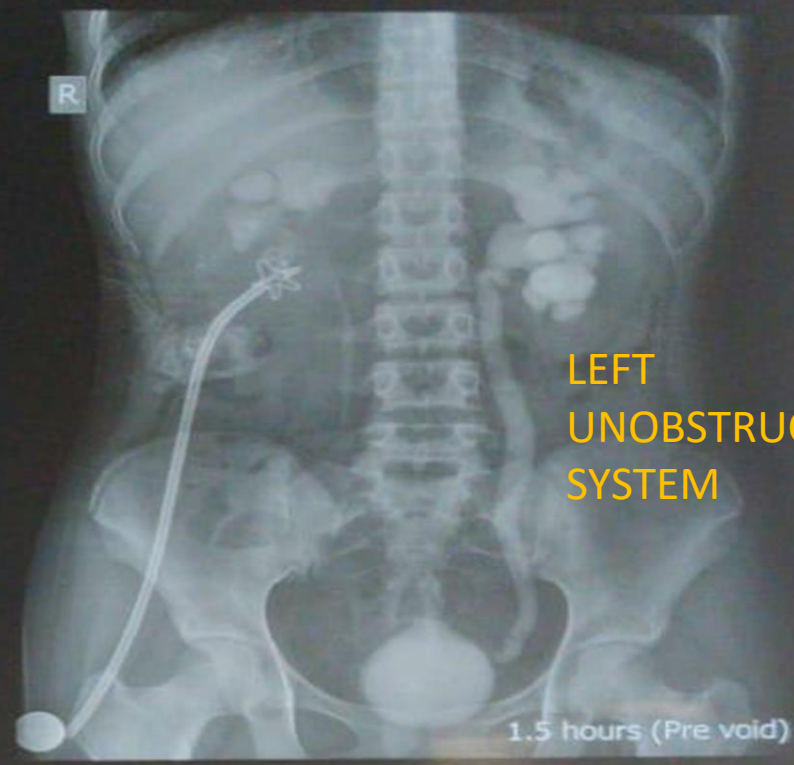




IVP PLAIN KUB 09/12/2020 10:41:47 AM

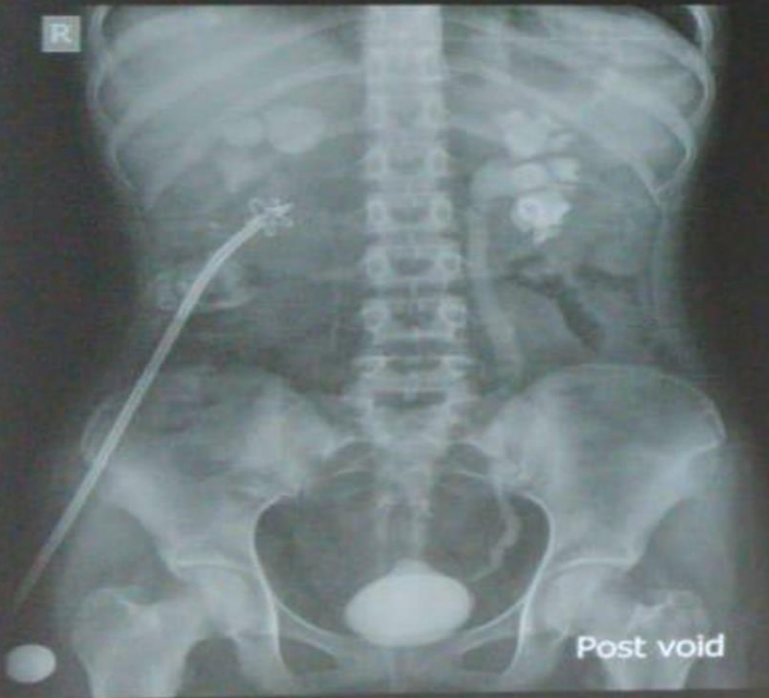


IVP PLAIN KUB 09/12/2020 10:46:12 AM



LEFT  
UNOBSTRUCTED  
SYSTEM

IVP PLAIN KUB 09/12/2020 11:52:54 AM



09/12/2020 11:54:15 AM



IVP PLAIN KUB 09/12/2020 03:45:48 PM

# IVP

- **Right Kidney**: Normal functioning ,Normal excreting Right Kidney with moderate hydronephrosis(**grade 3**).
- **Left Kidney**:Normal functioning Normal excreting Left Kidney,with mild hydronephrosis.
- **Small capacity** Urinary Bladder.

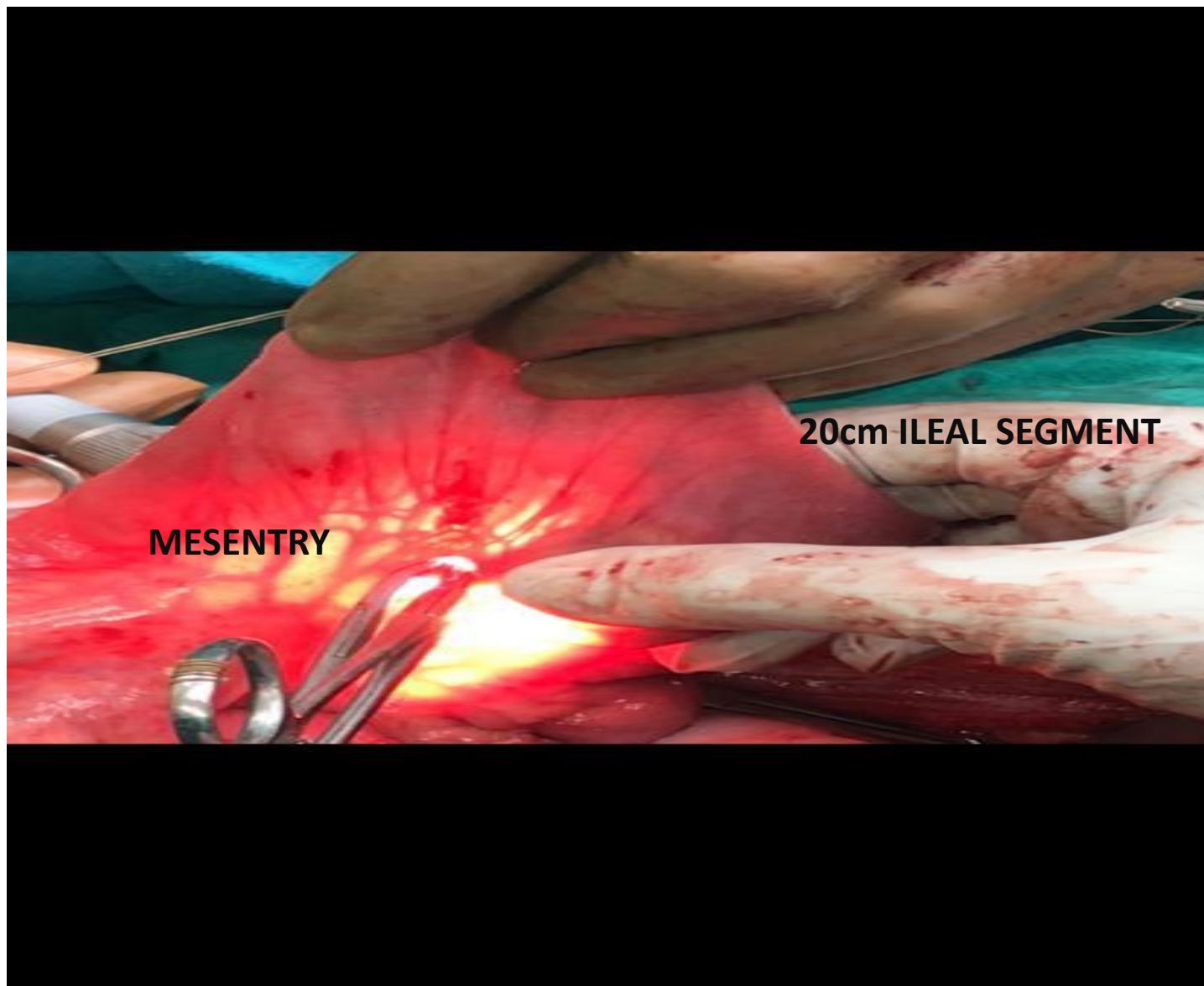
## Cystoscopy Findings

- External urethral meatus normal
- Urethra-normal
- Bladder neck normal
- Bladder walls appear thickened and trabeculated with evidence of scarring with scattered multiple haemorrhagic patches
- **Left U.O.-** Golf hole type uretric orifice (typical of tuberculosis)
- **Right U.O.-** could not be visualised
- Bladder capacity measured to be approximately 30ml

Management

# Pre operative planning

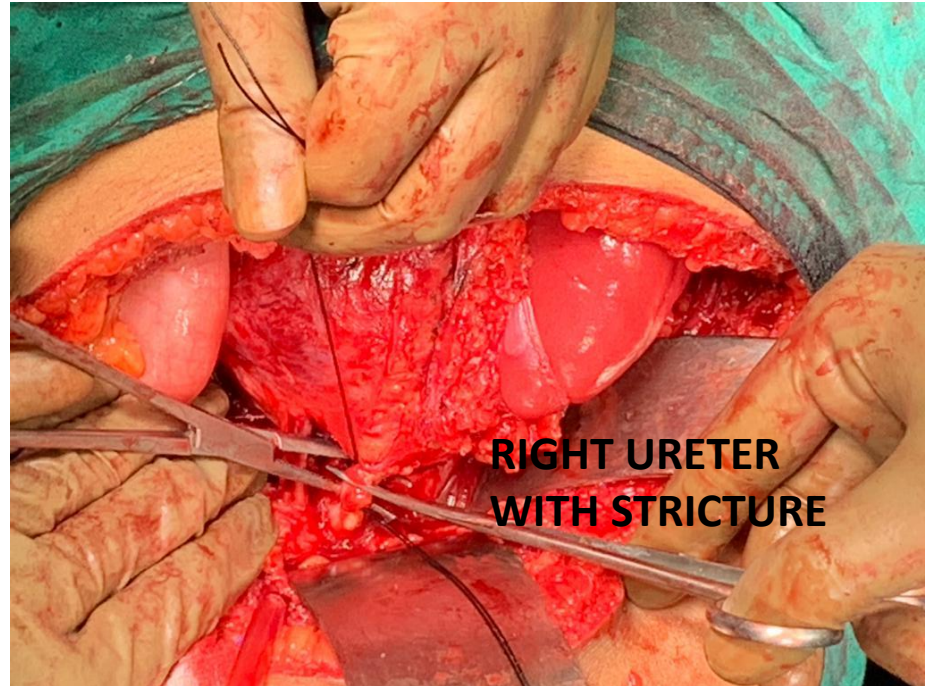
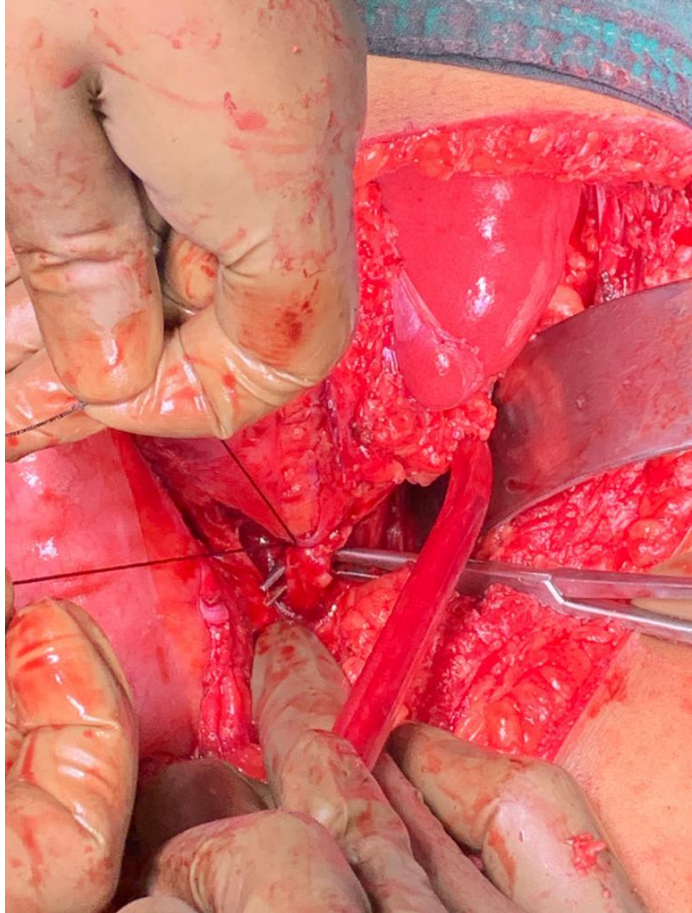
- Right ultrasound guided PCN(12 fr pig tail) insertion done (failed stenting attempt)
- Daily PCN output was approx. 1500ml/day
- Patient was started on empirical ATT drugs (4 drug induction regime) based on radiological findings and after taking the opinion of the pulmonologist
- After 3 months of ATT patient was planned for open augmentation cystoplasty to increase the bladder capacity with right ureteric reimplantation.
- Left ureteric reimplant was not planned as on table cystoRGP showed no obstruction and emptying of the PCS



**20cm ILEAL SEGMENT**

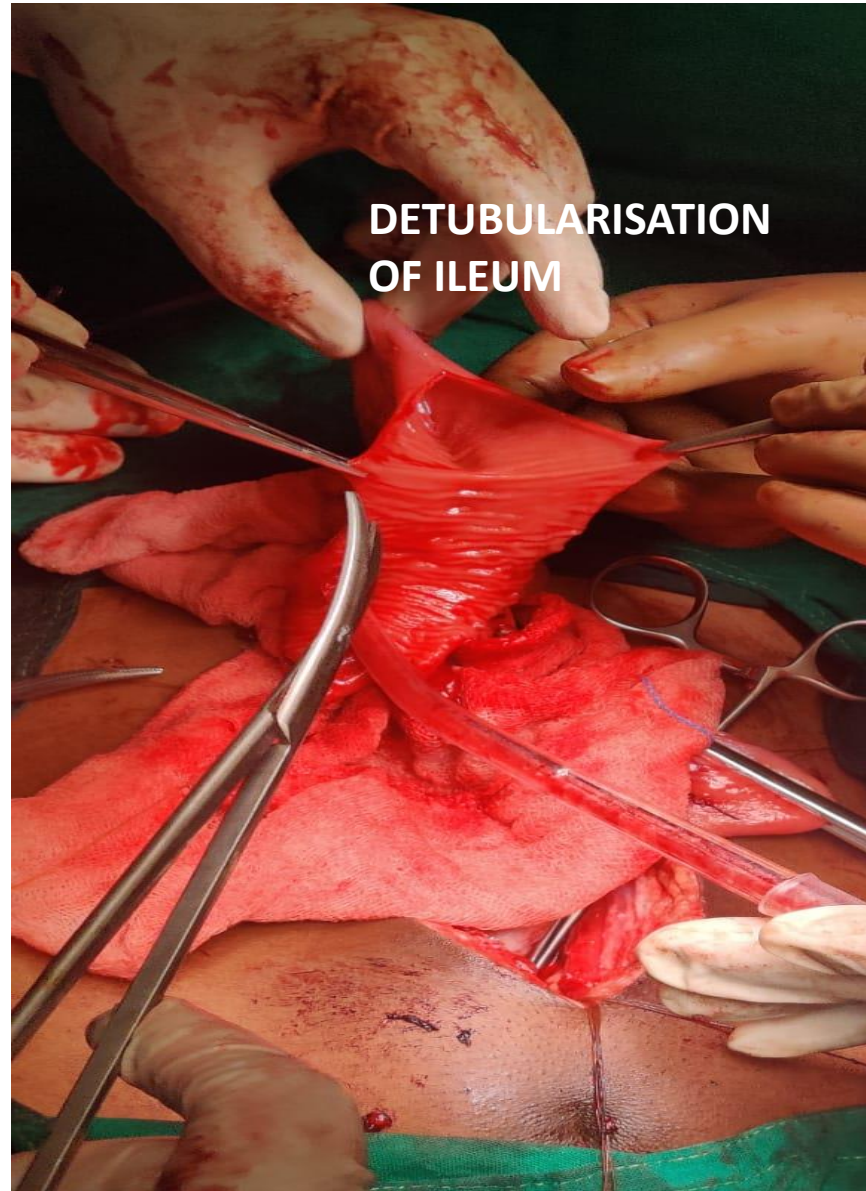
**MESENTRY**



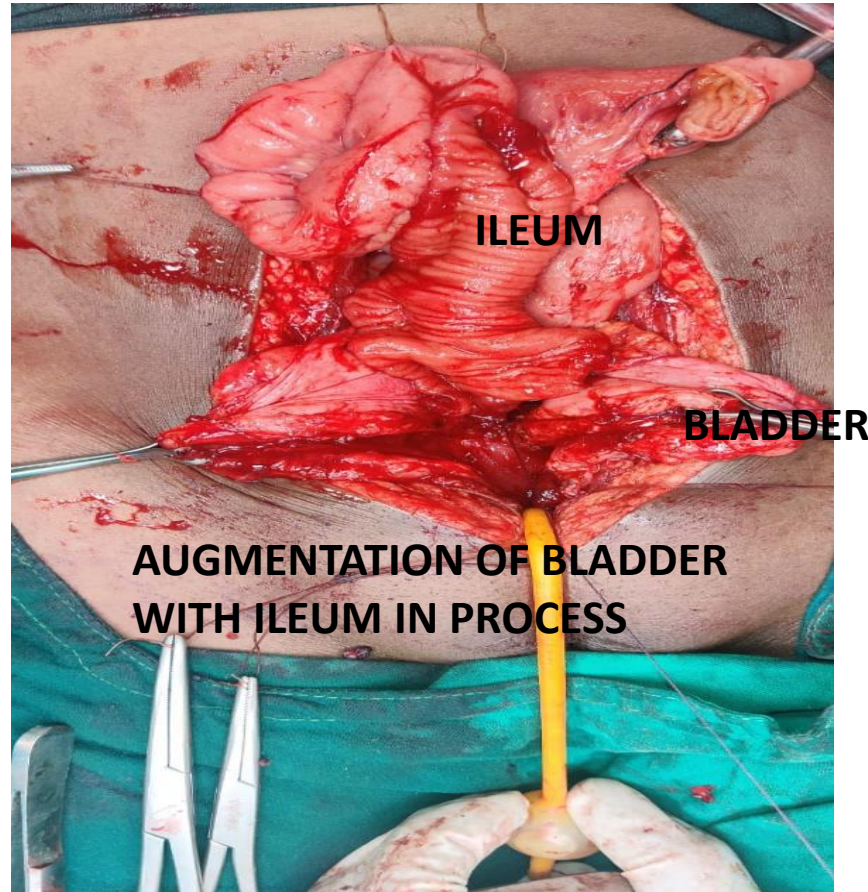


**RIGHT URETER  
WITH STRICTURE**

**DETUBULARISATION  
OF ILEUM**



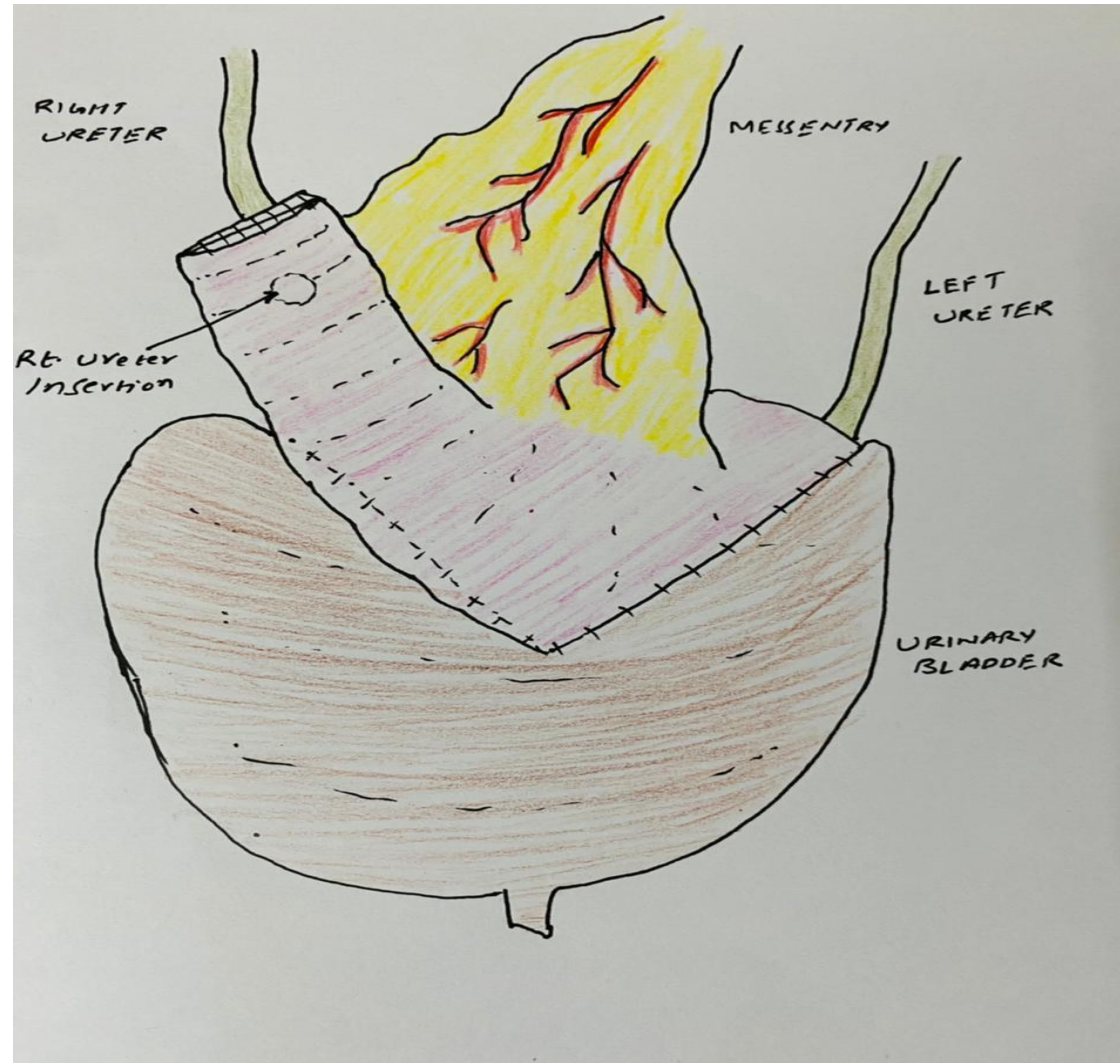




**ILEUM**

**BLADDER**

**AUGMENTATION OF BLADDER  
WITH ILEUM IN PROCESS**



# Complications to tackle –

- It is quite uncommon now to find GUTB causing anatomical deformation at multiple levels including bladder, ureters and VUJ.
- Above patient was not able to hold her urine more than 30 minutes with severe urgency due to very small capacity of bladder of less than 30- 40 ml, which was affecting her daily routine including her schooling.
- Along with a small capacity bladder patient also had right sided ureteric stricture causing severe backpressure changes in right kidney.

# Intraoperative management

- Intraoperative bladder was completely bivalved into two halves and a 20cm segment of ileum was separated on all sides except on mesentery side.
- The ileum was used to augment the urinary bladder and increase its capacity. After removing the stricturous part of right ureter the small length of remaining ureter was another challenge intraoperatively.

- The ileum was refashioned on right side in a tubular structure and the right ureter was anastomosed to the tubularized part of bowel.
- The left side of ureter was left as such. The VUR on left side was expected to resolve once bladder capacity increases and there was no obvious obstruction.
- A major surgery was completed in Urology department of Dr D Y Patil hospital in an uneventful manner. Post operative period was uneventful.

# Post Op and follow up

- The drains, foleys catheter and PCN were gradually removed over next couple of weeks.
- At present patient is able to lead a normal lifestyle. She can hold urine more than 4 hours as opposed to less than 30 min previously.
- Her bladder capacity is more than 300 ml. She has started gaining weight and in a better mental and physical condition than before.
- Its further uncommon to find complete medical remission on ATT along with reconstructive surgical correction making a severely symptomatic patient coming back to almost leading a normal life symptoms free.





# Theory

- Augmentation cystoplasty is an uncommon surgery done these days. The success rate of these reconstructive surgeries in a case GUTB is further questionable.
- Every patient is different and individualized preoperative planning and intraoperative innovative decisions makes a surgery successful as done in this case.

# Case 2

# CASE 2

- Another similar case of a young male patient with bilateral VUR causing back pressure changes and gross derangement in renal functions making him CKD 5 dependent on dialysis.
- The only option of him getting free of dialysis was renal transplant. But due to gross VUR on either side the transplanted kidney would have failed in due course of time.
- After planning the patient underwent bilateral ureteric reimplant surgery done by our team which was successful and results were quickly observed post surgery.

- The patient underwent renal transplant after one month and post transplant the patient had normal renal parameters and lead a dialysis free life over next few months.
- This is another example of unusual planning for a patient with 2 different pathologies making him disease free in period of 1.5 months

# CASE 3

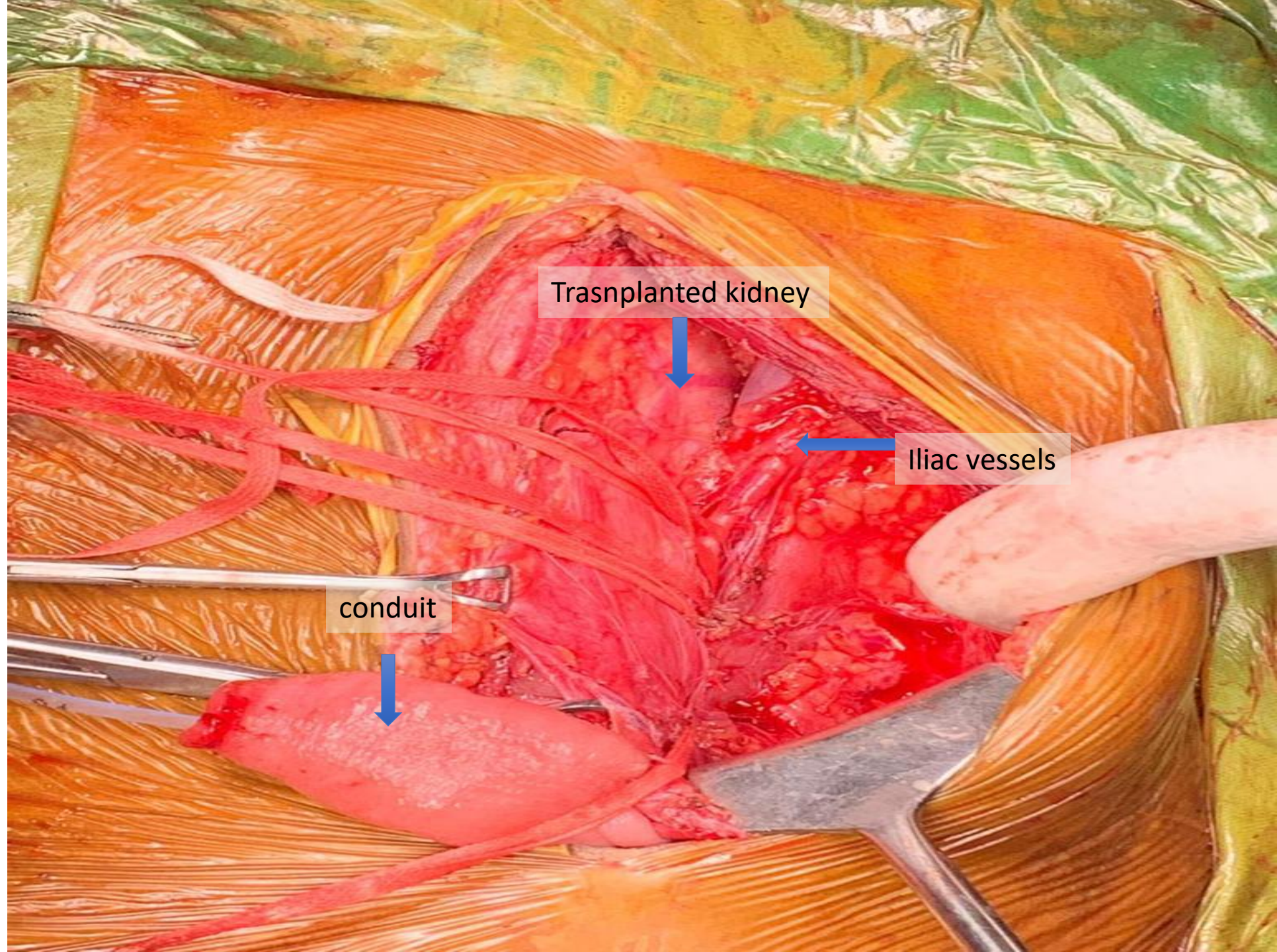
- 11/F presented with CKD, Neurogenic bladder and right VUR, small capacity urinary bladder secondary to VUR in our department.
- Patient underwent live related renal transplantation, uretric ileal anastomosis, ileal conduit with an ileal stoma through abdominal wall.
- An another well planned and well executed surgery done in our department with good result.
- The patient at present is doing well and her renal parameters are within normal limits.



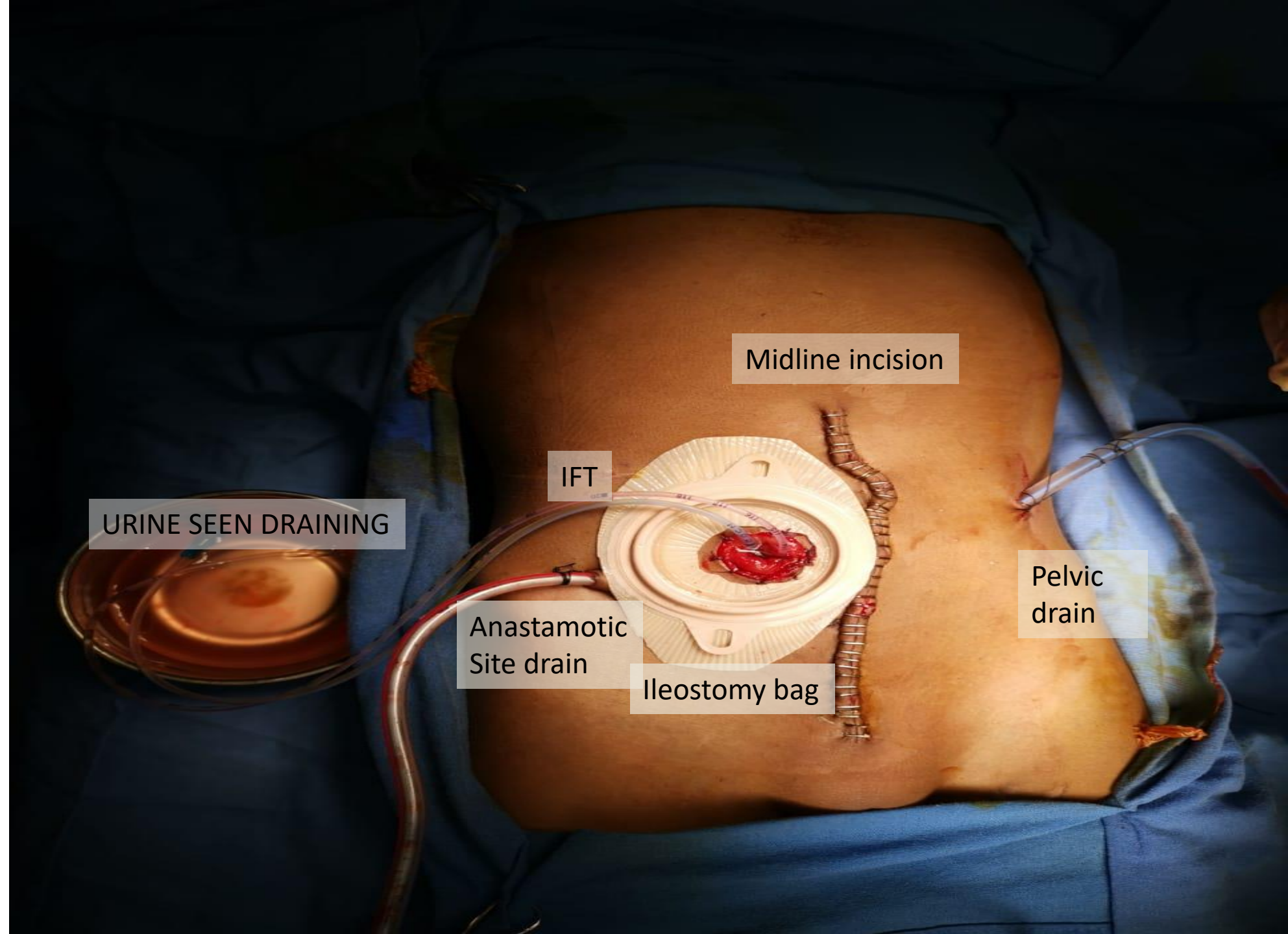
Left ureter being isolated for  
reimplantation

This is an intraoperative photograph showing a surgical procedure. A large, pink, tubular structure, the left ureter, is being isolated. It is surrounded by a network of blood vessels and other tissues. Several surgical instruments, including forceps and scissors, are visible, used to manipulate and isolate the ureter. A blue arrow points to a specific area on the ureter, likely indicating the site for reimplantation. The surgical field is illuminated, and the background shows the typical appearance of a surgical site with various tissues and structures exposed.









Midline incision

IFT

URINE SEEN DRAINING

Pelvic  
drain

Anastamotic  
Site drain

Ileostomy bag

- Thank you