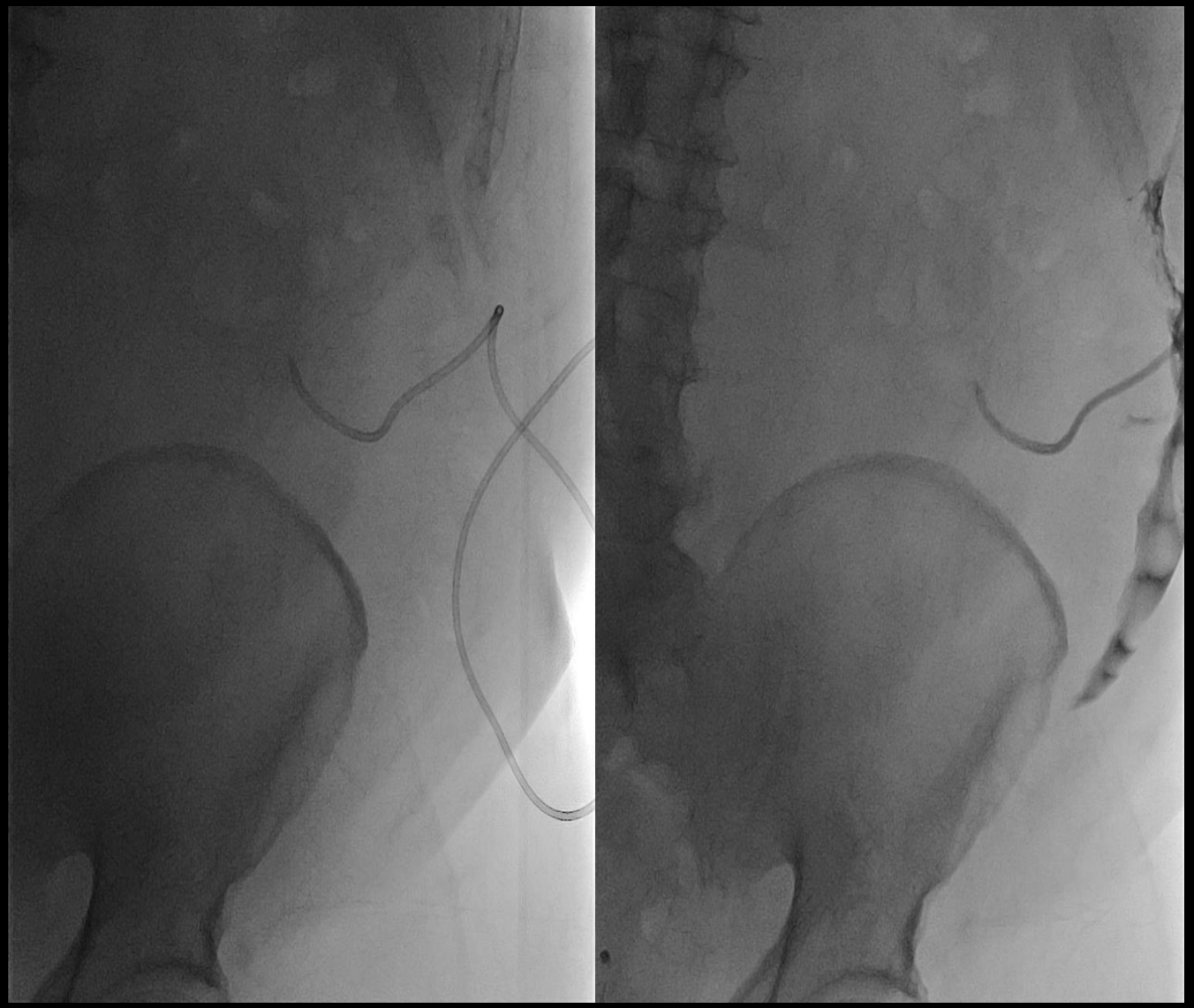
Rendezvous Repair of a Transcolonic Nephro-ureterostomy

Case Presentation

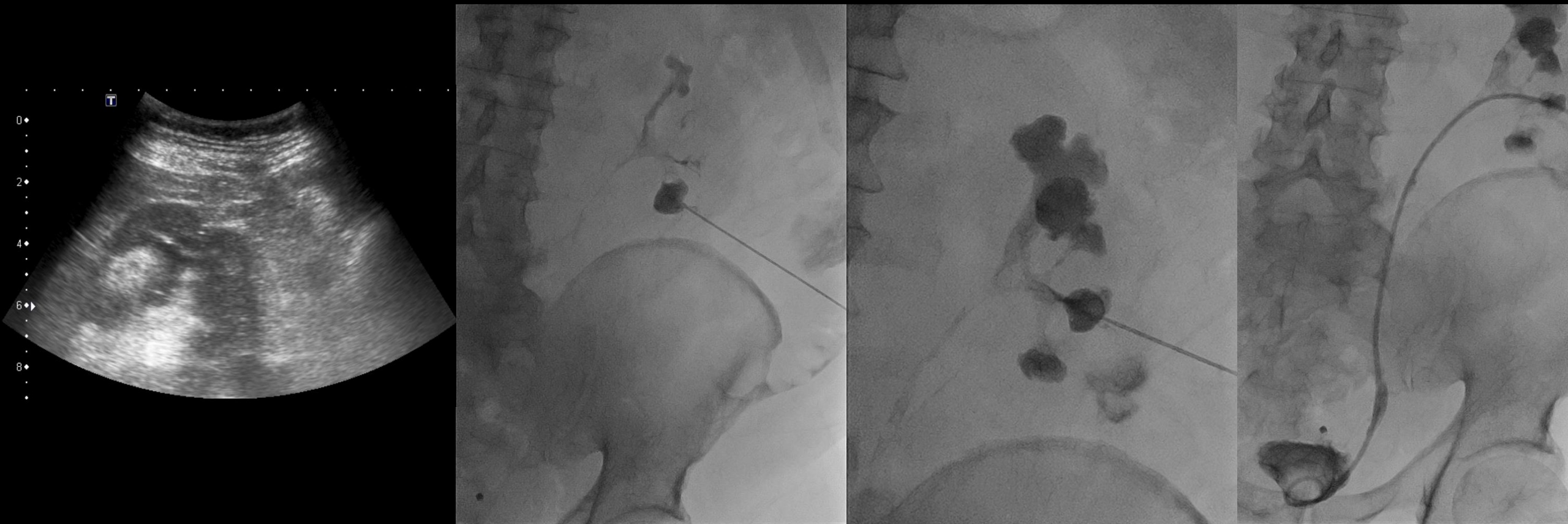
- 63-year-old male with diffuse large B-cell lymphoma (DLBCL) and left-sided hydroureteronephrosis related to lymphomatous soft tissue in the left hemi-pelvis
- Left nephro-ureterostomy successfully inserted
- Presented 10 days following initial insertion for peri-catheter leakage and persistent hydronephrosis



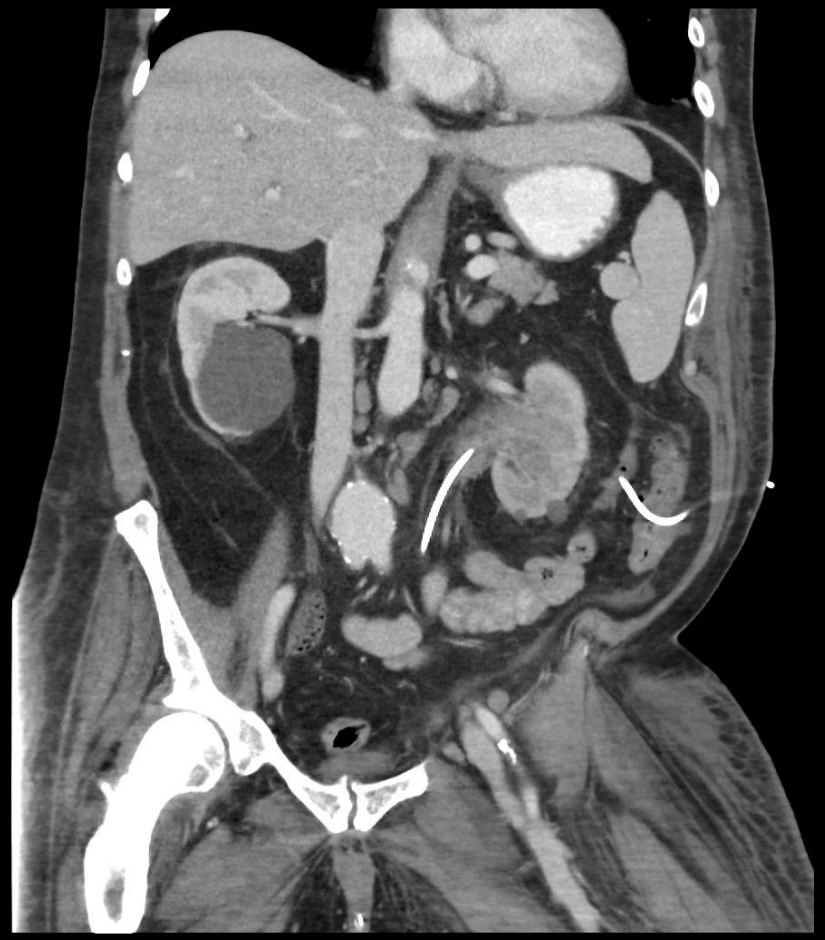
- In-situ 8-French nephro-ureterostomy retracted into perinephric soft tissues
- Attempts to regain access via the existing tract were unsuccessful and a new puncture was required

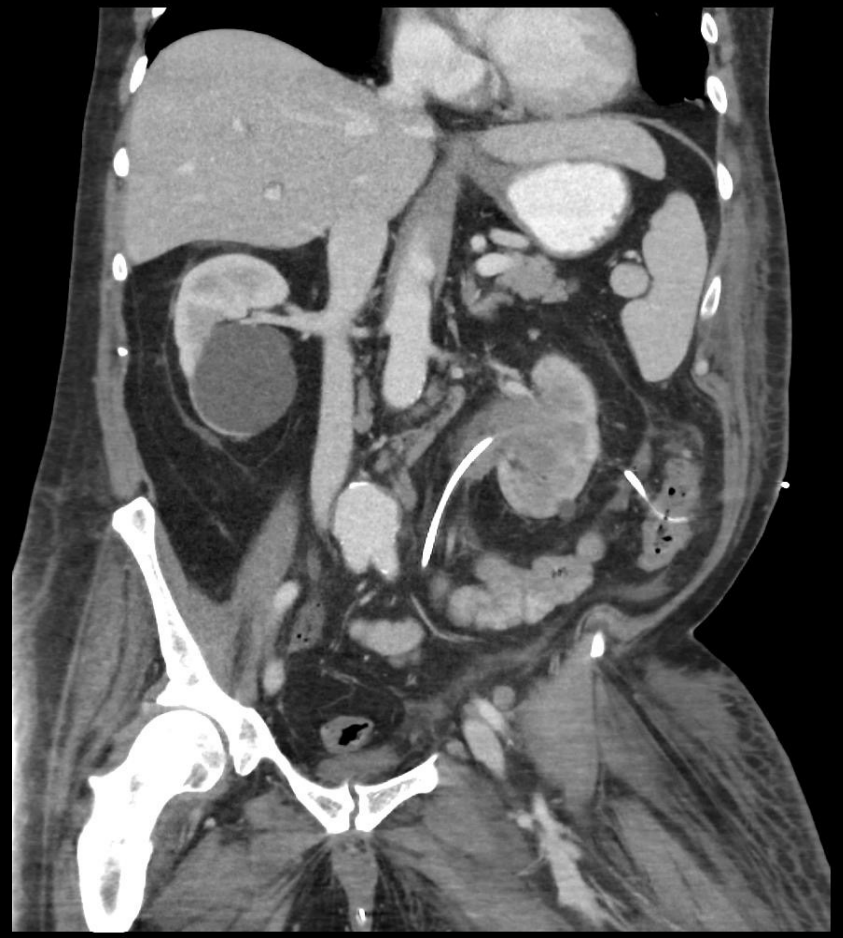
Reinsertion Technique

- Patient positioned supine
- Initial US-guided access lost while delivering the wire
- Second puncture performed by fluoroscopic-guidance
- 8-French nephro-ureterostomy successfully reinserted



- Post-procedure day 3 the patient became febrile and was bacteremic with blood and urine cultures positive for Enterococcus *faecalis* (E. *faecalis)*
- CT abdomen was performed:



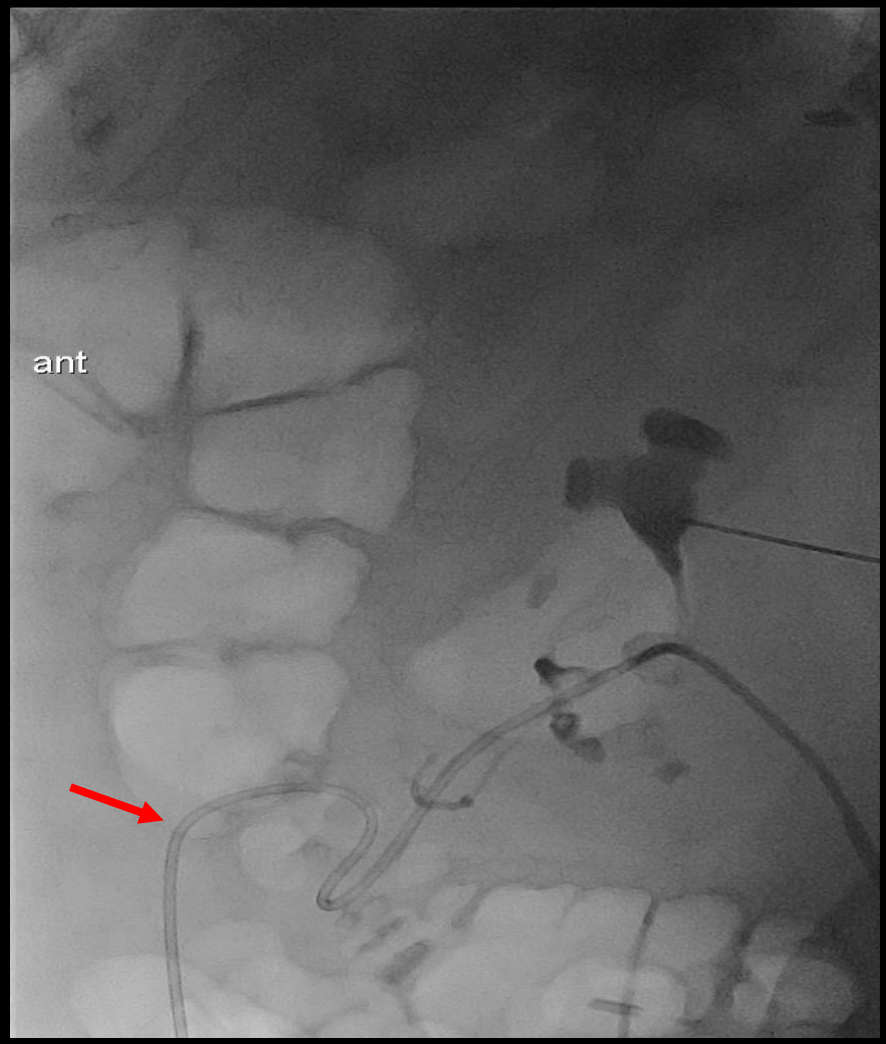


Management Options?

- Allow tract to mature and then remove
- New nephrostomy for decompression and retract the catheter to create a colostomy with removal once tract matured
- Combined endoscopic and fluoroscopic procedure for removal and closure

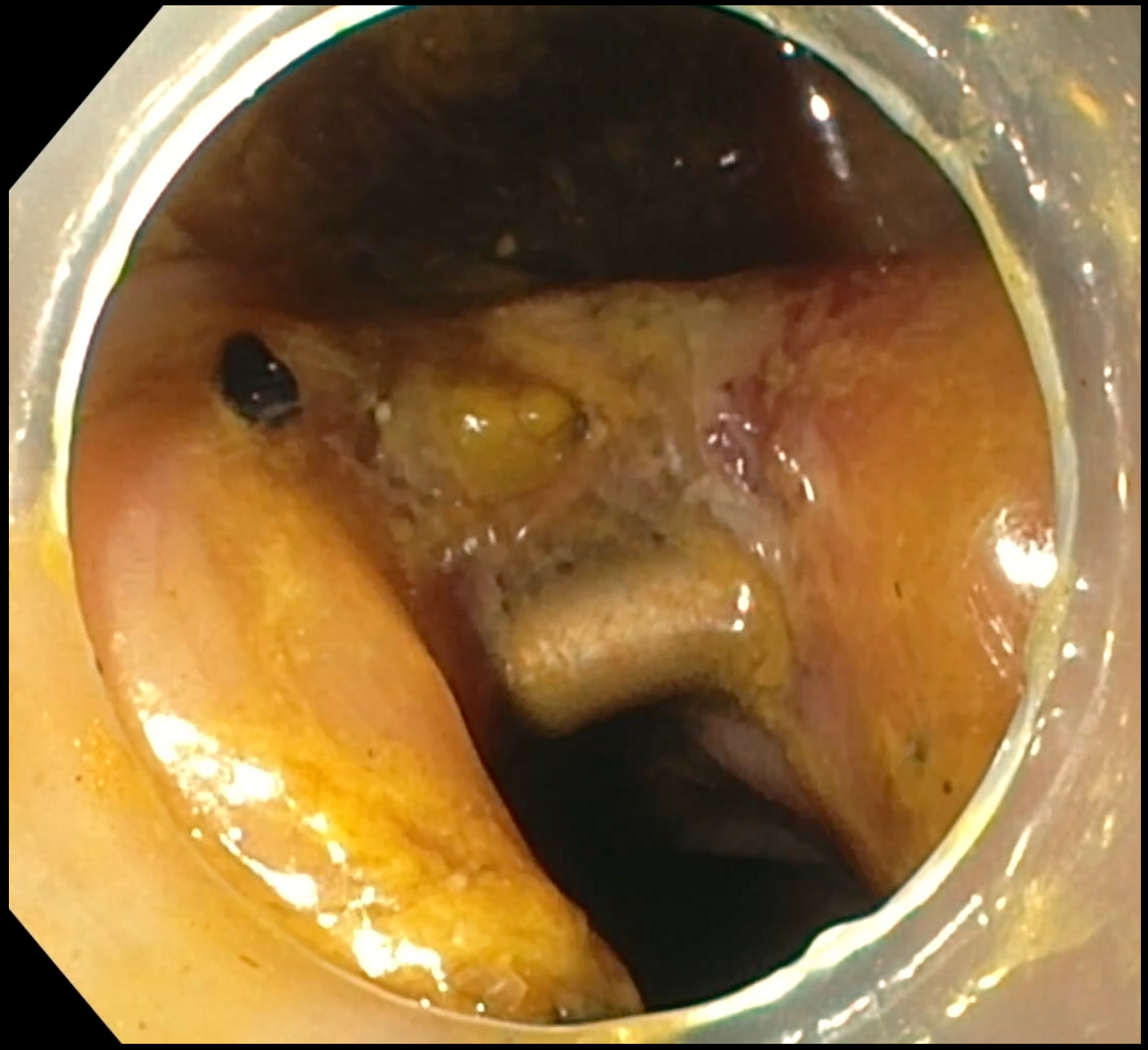
Closure Technique

- Patient positioned right lateral decubitus
- US-guided access of the left renal collecting system from posterior approach
- In-situ 8F trans-colonic nephro-urerostomy (→)



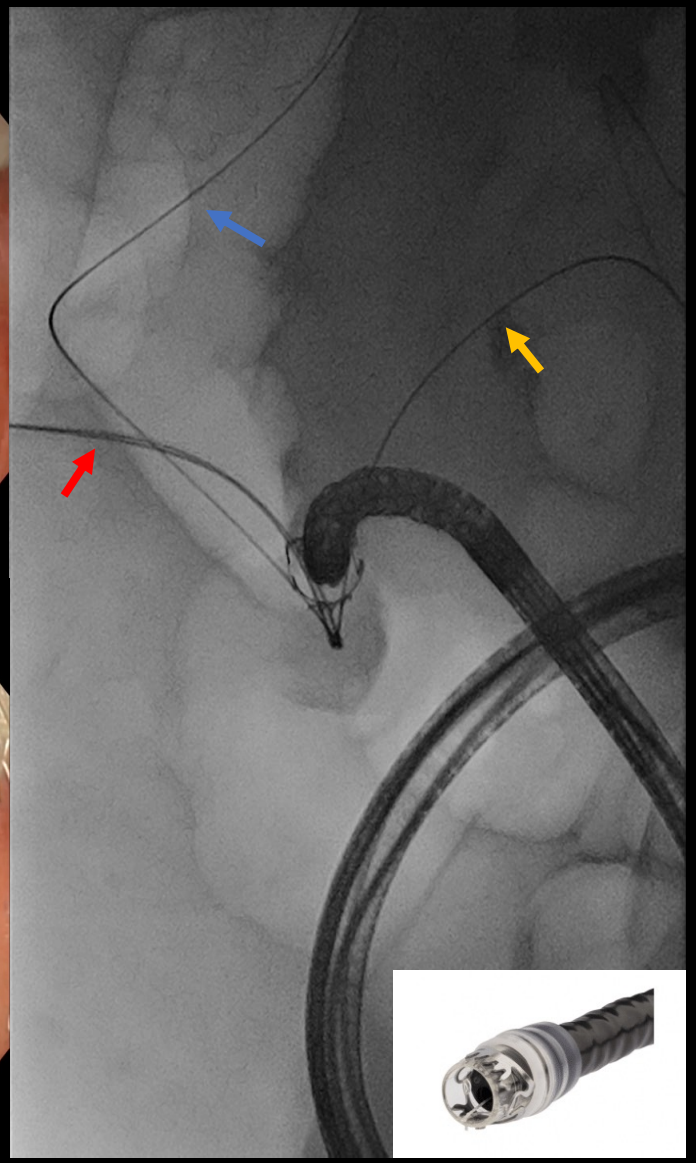
Closure Technique

- Direct endoscopic visualization of the trans-colonic nephro-ureterostomy



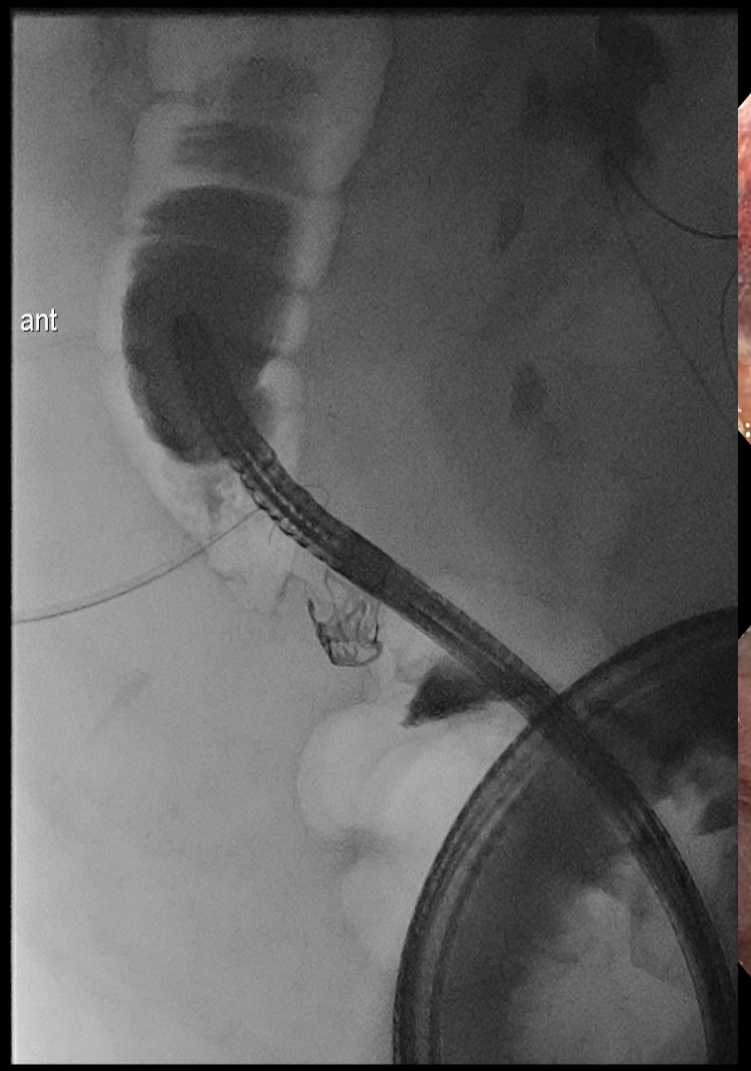
Closure Technique

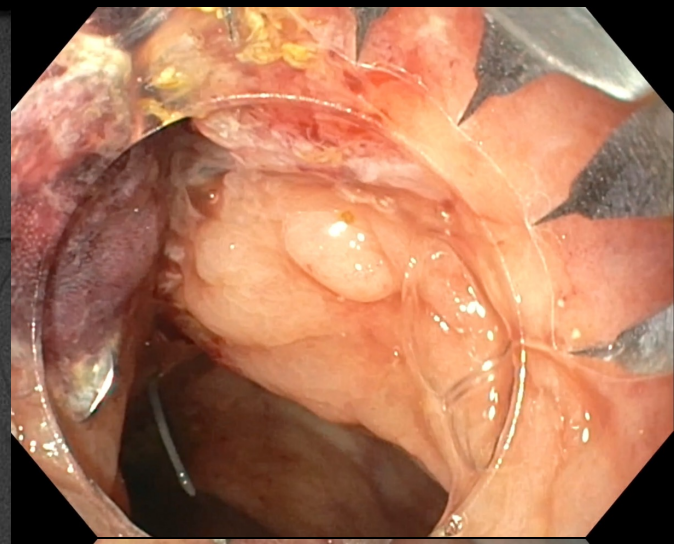
- Trans-colonic nephro-ureterostomy removed over Amplatz wire (→)
- 8-French 25 cm-long sheath then placed (→)
- Glidewire inserted and advanced into more proximal colon as a safety wire (→)
- Under fluoroscopic guidance and endoscopic visualization, Amplatz wire was removed and inner hole apposed with 12/6gc over the scope “bear claw” clip (OTSC) (OVESCO Endoscopy USA, Inc)

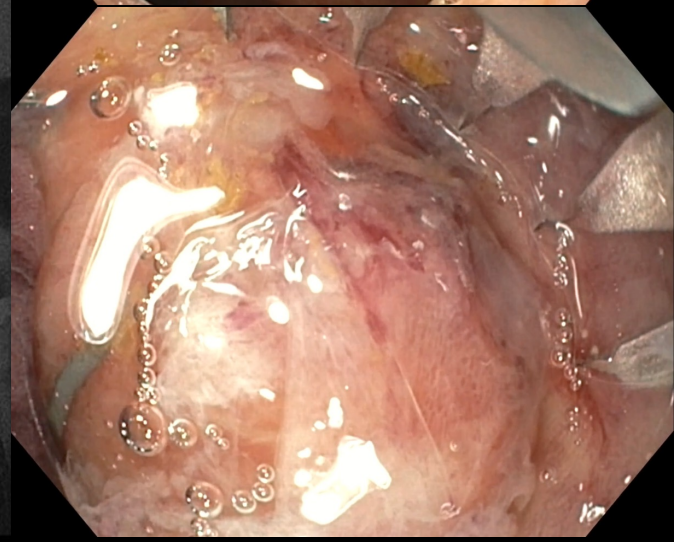


Closure Technique

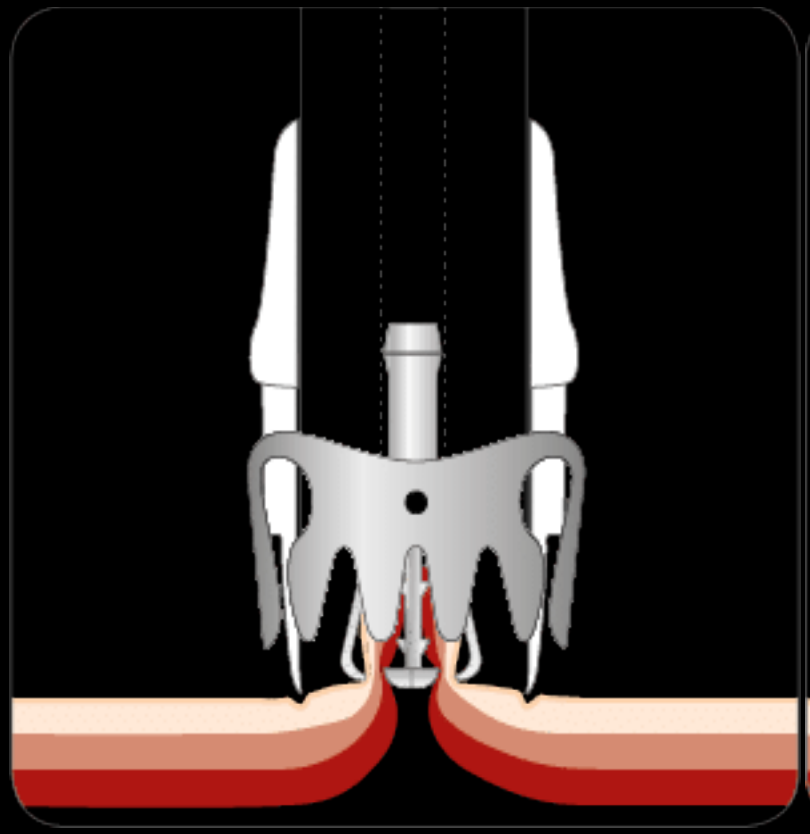
- Glidewire and sheath remained in place following closure of the inner colonic perforation
- Second 12/6gc OTSC “bear claw” clip was mounted to the endoscope and advanced to the site of the Glidewire, demarcating the more superficial colonic perforation
- As the sheath and Glidewire were slowly withdrawn, the “bear claw” clip was positioned and the more superficial hole was apposed under fluoroscopic and endoscopic guidance

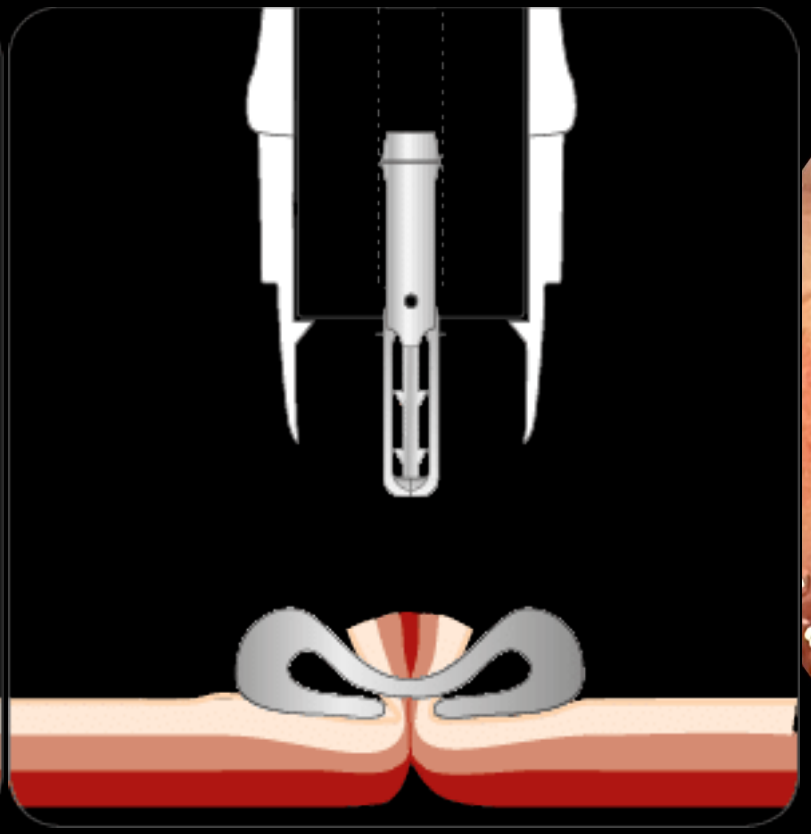


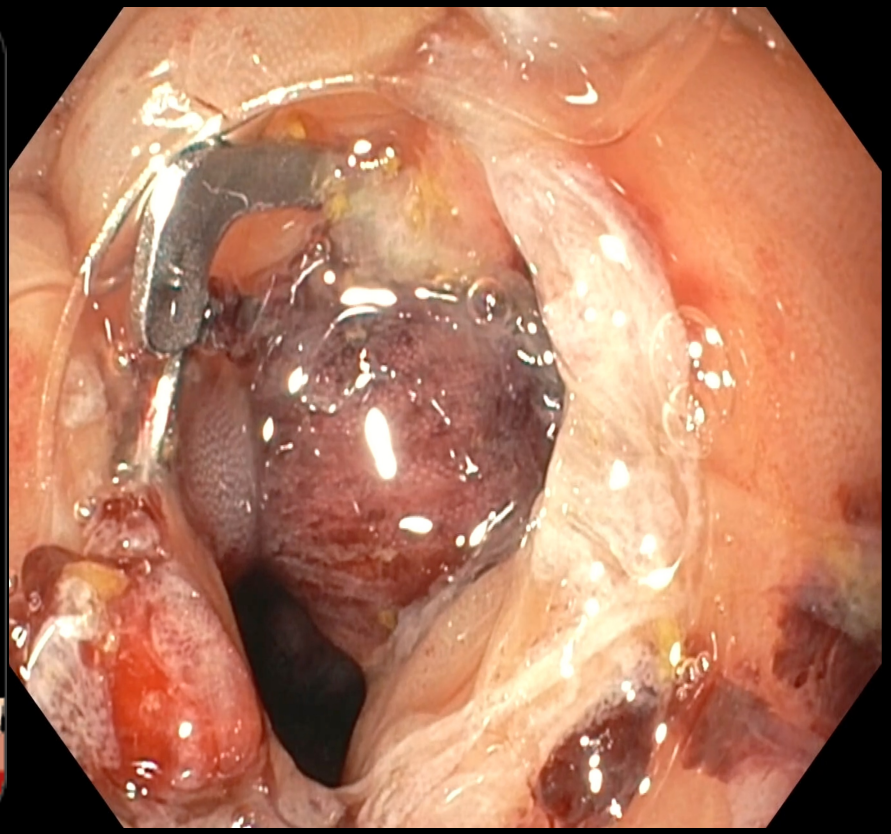




Closure Technique

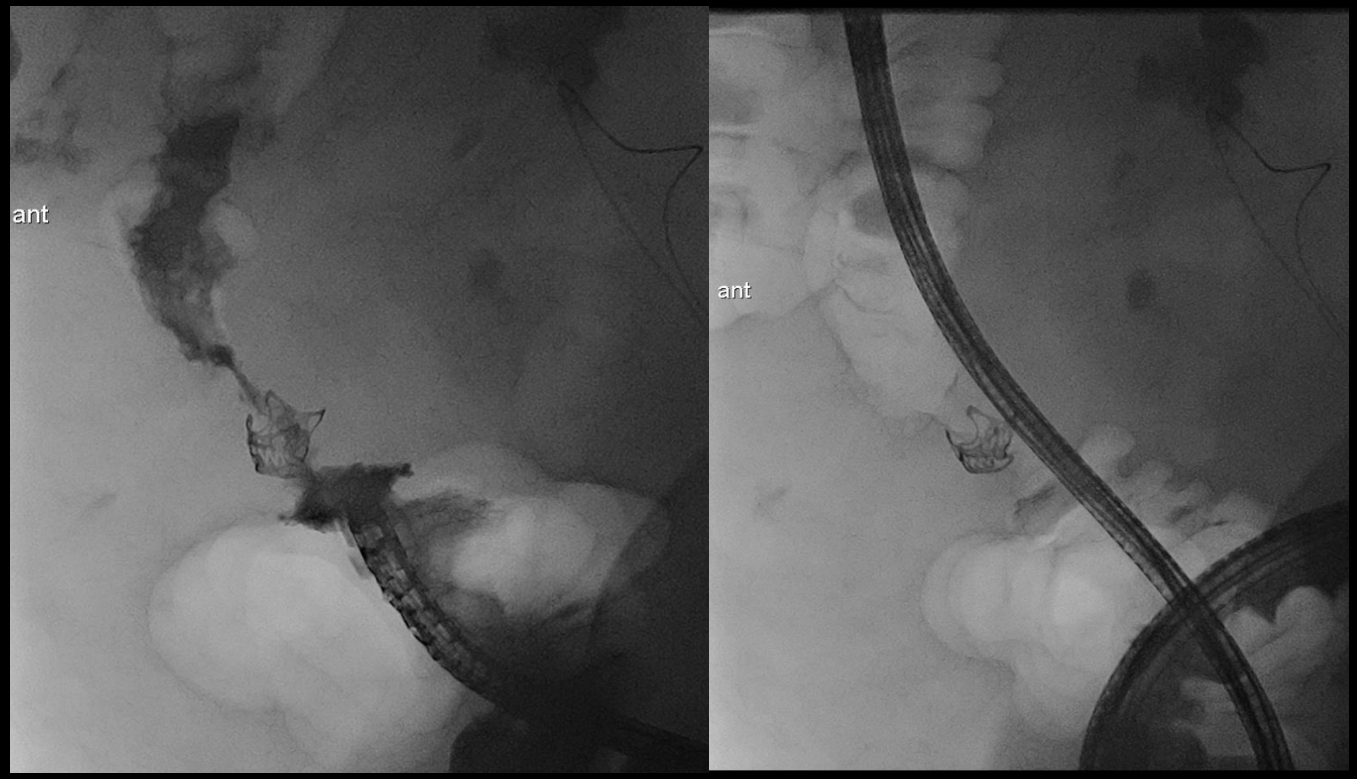






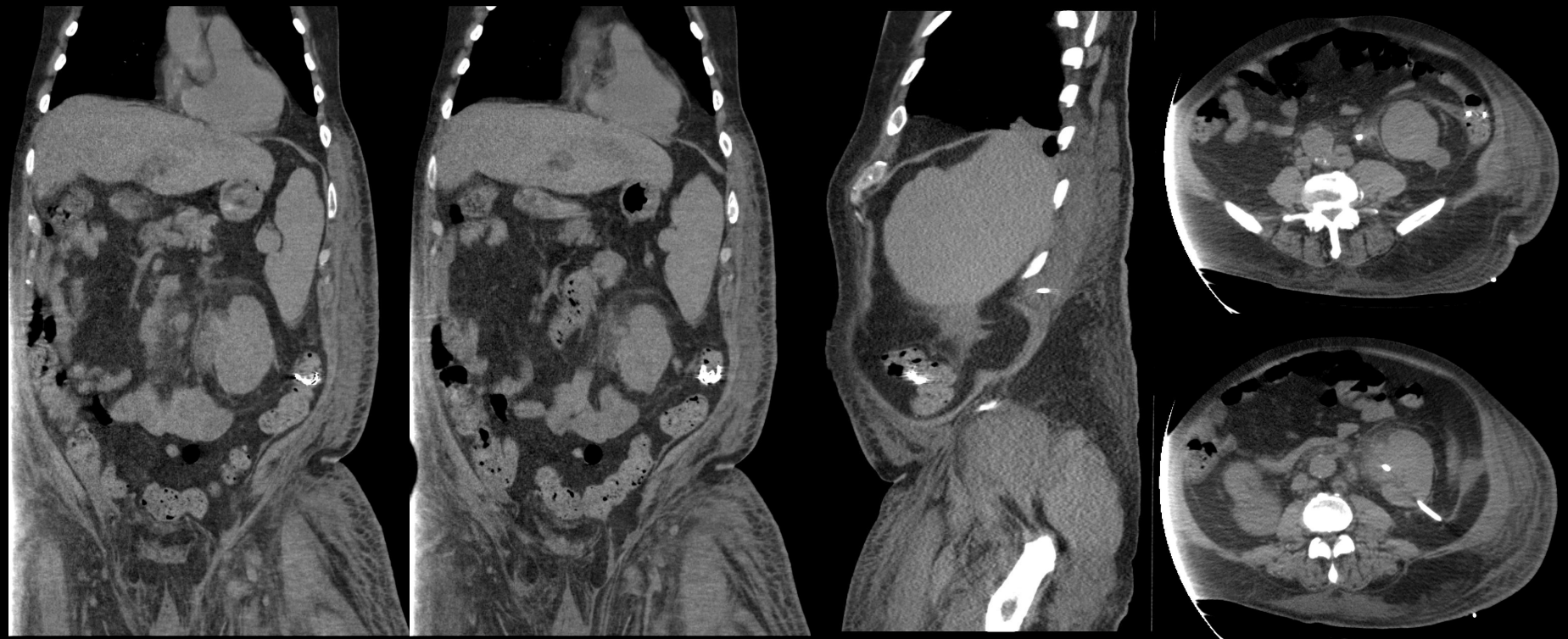
Closure Technique

- Completion contrast injection via endoscope demonstrating patent colonic lumen with no extraluminal extravastion
- Endoscope easily passed by the clips to confirm patency of the colonic lumen



Follow-up

- Post procedure the patient's bacteremia and infectious symptoms resolved
- Able to resume palliative chemotherapy
- CT abdomen demonstrated no free air, no intra-abdominal abscesses, no evidence of large bowel obstruction and satisfactorily positioned left nephro-ureterostomy



Discussion

- Transenteric injury during nephrostomy/nephro-ureterostomy is rare (0.2%) but may have serious clinical consequences
- Risk factors for transenteric injury include retro-renal colon, renal anomalies, previous surgery, chronic colonic distension, and lateral approaches
- Transenteric nephrostomy/nephro-ureterostomy placement has classically been managed conservatively by placement of a new percutaneous nephrostomy and conversion of the transenteric nephrostomy into a colostomy to allow formation of a mature tract

Discussion

- In selected cases the clinical scenario may warrant more immediate definitive management of inadvertent enteric injury during IR procedures
- Advances in techniques allow for coordinated imaging and endoscopy guided rendezvous procedures for repair of inadvertent enteric injuries
- Our technique presented herein provides an alternative to conservative approaches for management of inadvertent transenteric tube insertions at centres with advanced endoscopy and interventional radiology, allowing for more immediate and definitive management

References

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