

Percutaneous Nephrostomy for an Obstructed Ectopic Pelvic Kidney in an Obese Patient Supported by Artis zeego and Large Volume syngo DynaCT

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Patient history

46-year-old morbidly obese female presented with high fevers, chills and lower abdominal pain. Her condition rapidly worsened to include lethargy and hypotension.

Diagnosis

Pyelonephritis and urosepsis. The etiology was found to be ureteral obstruction of an ectopic right pelvic kidney on a multidetector CT scan of the abdomen and pelvis. An attempt to treat the obstruction using cystoscopy resulted in inadvertent ureteral perforation with placement of a double J ureteral stent outside of the collecting system. The patient's condition continued to deteriorate requiring urgent placement of a percutaneous nephrostomy tube under general anesthesia.

Treatment

Multiple Large volume syngo DynaCT acquisitions with Artis zeego were performed to guide a 22-gauge Chiba needle into the posterior calyx of the ectopic pelvic kidney. The ectopic position of the kidney left only a narrow window for percutaneous access requiring passage through the psoas muscle to a depth of 20 cm. After access was obtained, fluoroscopy was used to position a 10 French nephrostomy tube within the renal pelvis.



Dr. Warren Swee and the new Artis zeego multi-axis system at UVA

Comments

Following nephrostomy tube placement and medical management, there was complete resolution of the patient's urosepsis.

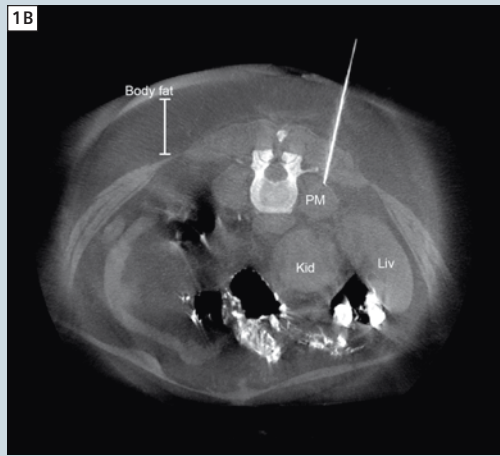
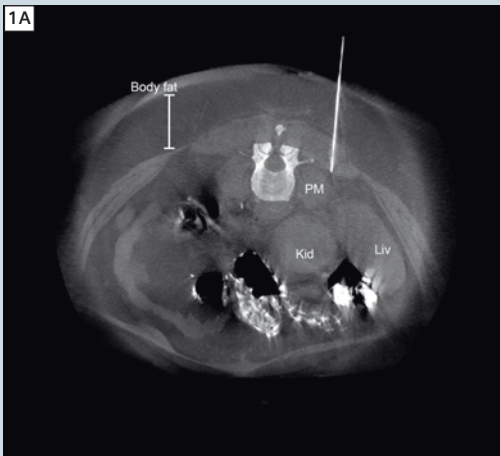
Acknowledgements

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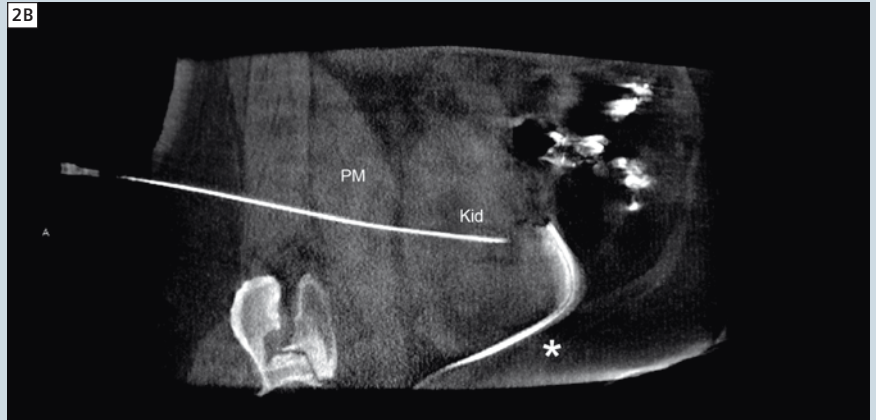
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1A+B Axial Large Volume syngo DynaCT images demonstrate a narrow window to access the ectopic pelvic kidney (Kid) between the spine and liver (Lv). Fig 1 shows the first needle pass to be directed laterally toward the liver capsule. Fig 2 shows successful redirection of the needle along the intended course through the psoas muscle (PM). Due to massive percutaneous fat issue, a Large Volume syngo DynaCT acquisition is extremely helpful.



2A+B Axial and sagittal MIP (maximum intensity projection) reconstructions of a Large Volume syngo DynaCT acquisition to demonstrate successful access to the renal collecting system. A previously placed mal-positioned double J ureteral stent is also seen. (*)



3A+B Axial and sagittal MIP reconstructions of a Large Volume syngo DynaCT acquisition demonstrate successful placement of a percutaneous nephrostomy tube within the renal pelvis.

