Case 1400

Eurorad

ECR 2002 COD #17: Prune-belly syndrome

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Section: Uroradiology & genital male imaging
Imaging Technique: MR
Case Type: Clinical Cases
Authors: S. K. Morcos, MD
Patient: 38 years, male

Clinical History:

A 38 year old man presented with a history of recurrent infection of the urinary tract.
Imaging Findings:

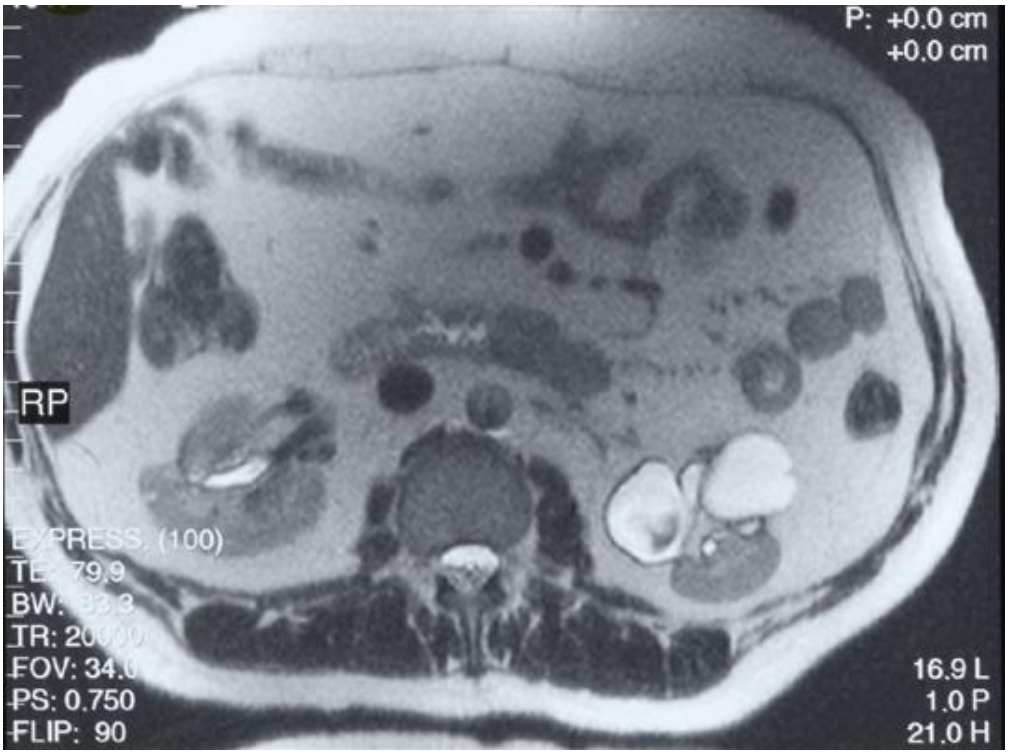
A 38 year old man presented with a history of recurrent infection of the urinary tract. Image findings: Heavily T2-weighted MRI examination of the abdomen, the axial images show: 1)Deficiency of the abdominal wall muscle. 2)Grossly scarred and small in size left kidney Mild cortical scarring of the lower pole of the right kidney. 3)Gross dilatation of the ureters throughout their course to the urinary bladder. Artefactual filling defects seen within the lumen of the dilated ureters. These are most likely to represent flow artefacts. 4)Unusual configuration of the urinary bladder with anterior indentation in the midline. This is most likely due to prominent medial umbilical ligament (the remnant of the urachus). The maximum intensity projection (MIP) of multi volume coronal with fat saturation imaging of the urinary tract shows clearly the grossly dilated ureters and the marked scarring of the left kidney.
Discussion:

Prune-belly syndrome is a congenital deficiency of the abdominal wall musculature associated with abnormal testicular descent, dilated ureters and other dystrophic urinary tract abnormalities. Marked dilatation, elongation and tortuosity of the ureters is often a prominent feature of the prune-belly syndrome. Vesico-ureteric reflux is usually present. The urinary bladder is usually dilated but not trabeculated. Urachal cyst or diverticulum may co-exist. The prostatic urethra is dilated and elongated with hypoplastic prostate. The kidneys variably demonstrate pelvicalyceal dilatation, parenchymal dysplasia, small size and diminished function. In some cases the kidneys are normal. The clinical course of prune-belly syndrome is variable. Renal failure and urosepsis are the principal complications of those who survive. MR urography without contrast injection is a simple non invasive technique to confirm the diagnosis of prune-belly syndrome. The combination of heavily T2 weighted axial images, MIP and slab imaging of the retroperitoneum allows comprehensive evaluation of the urinary tract. The dilated ureters are easily demonstrated by heavily T2 weighted acquisition as well as the deficiency of the abdominal wall muscles and the abnormalities of the kidneys and the urinary bladder.
Differential Diagnosis List: Prune-belly syndrome

Final Diagnosis: Prune-belly syndrome

Figure 1

a



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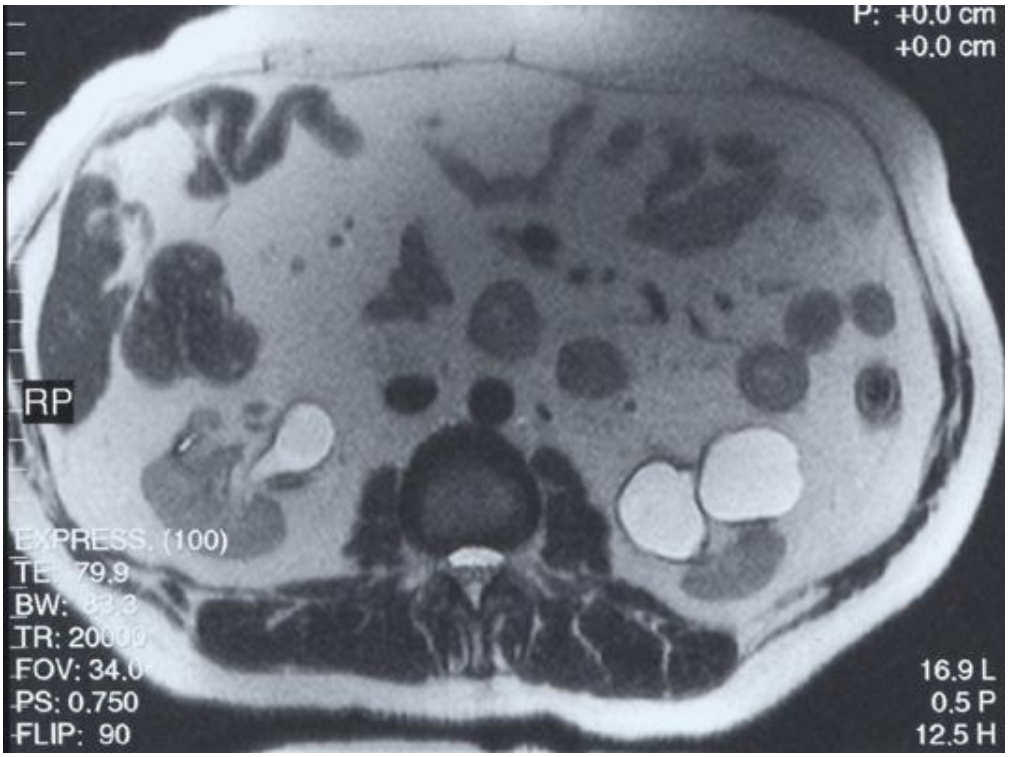

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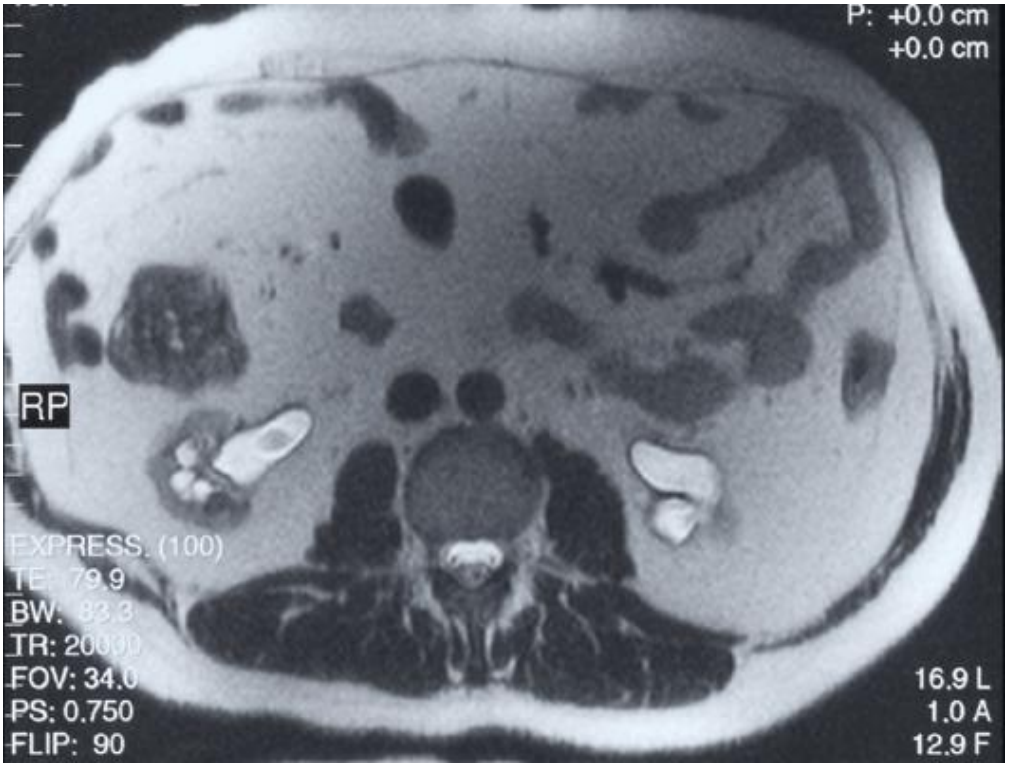

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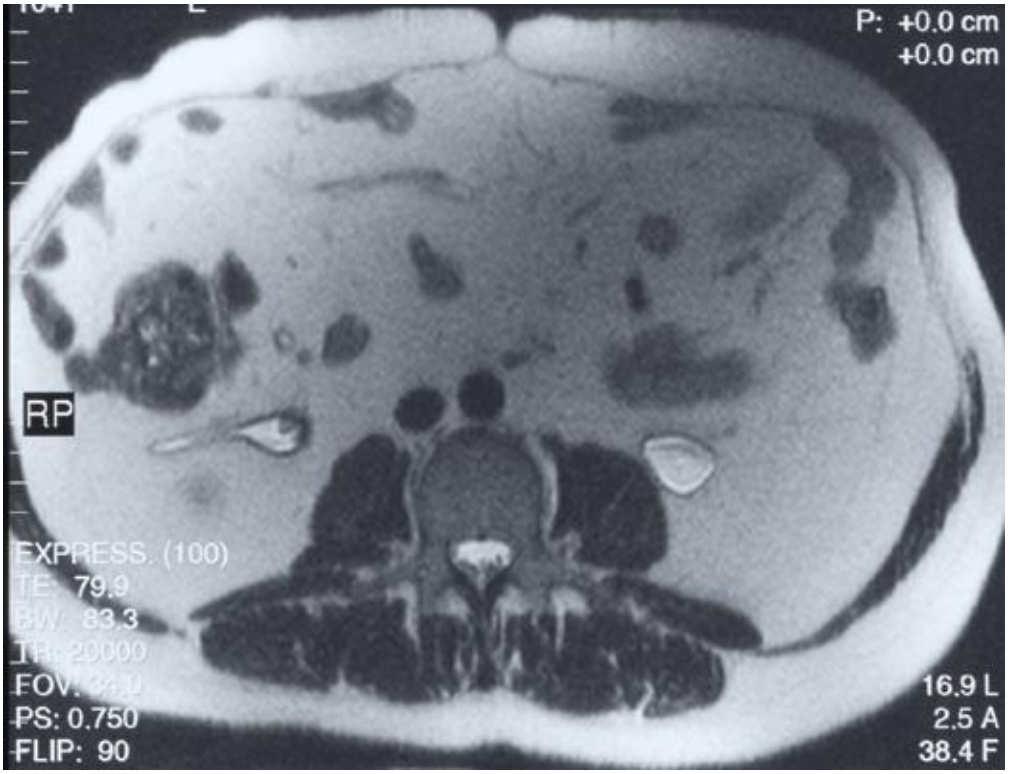

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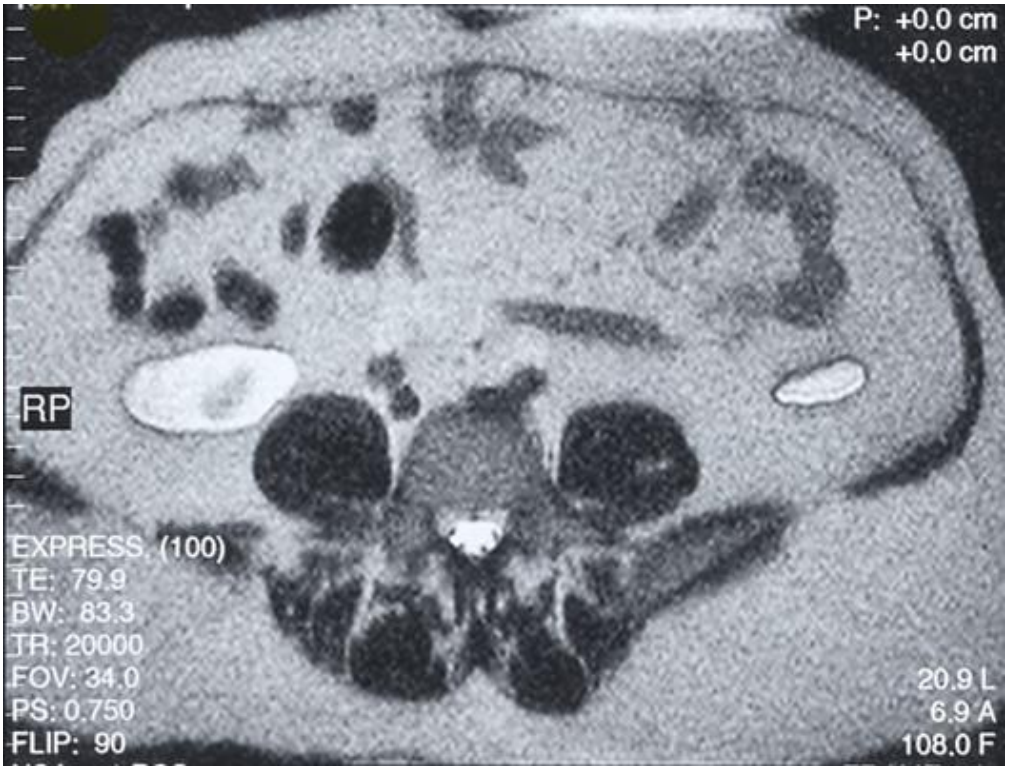

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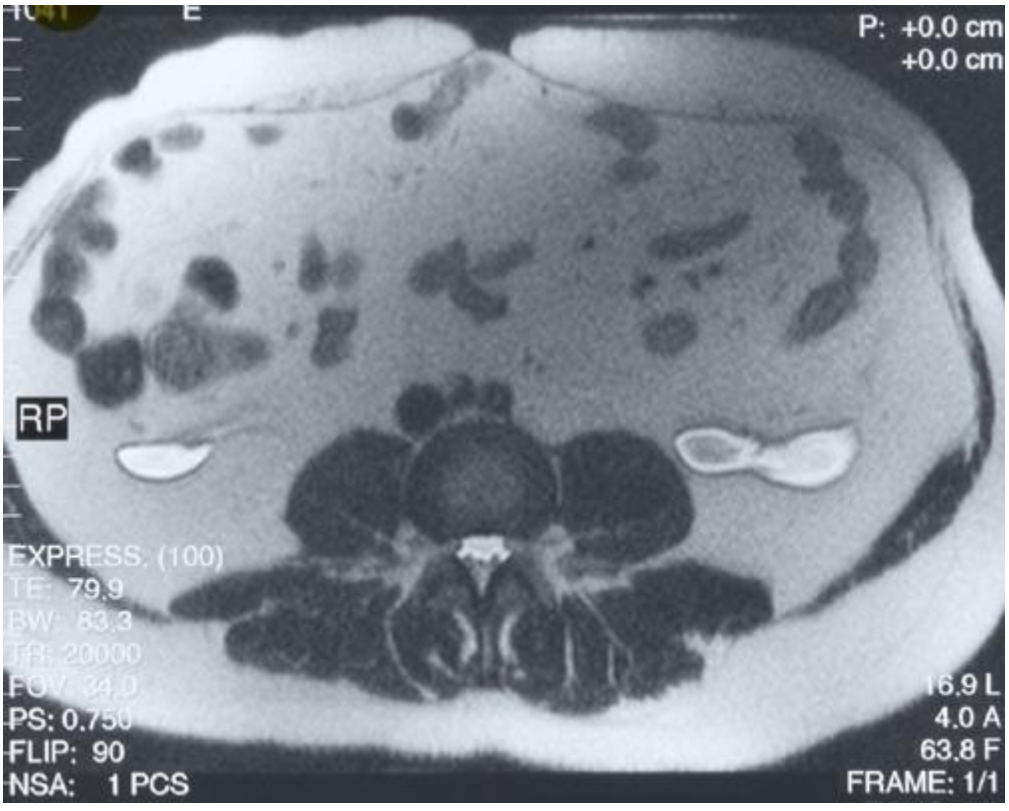

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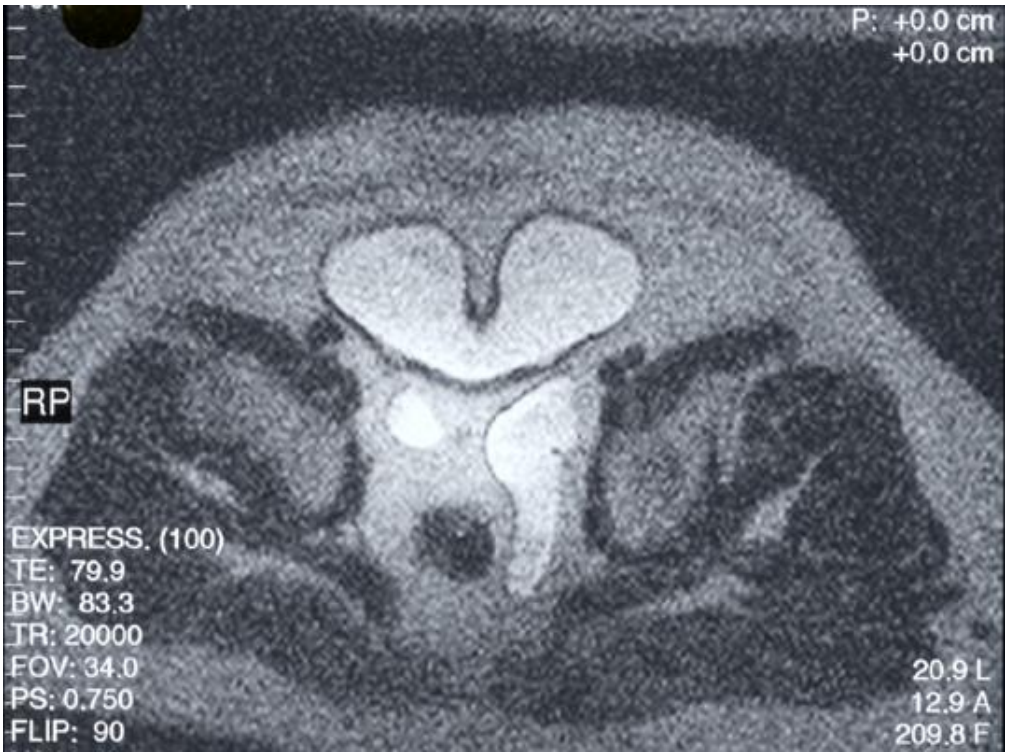
Figure 2

a



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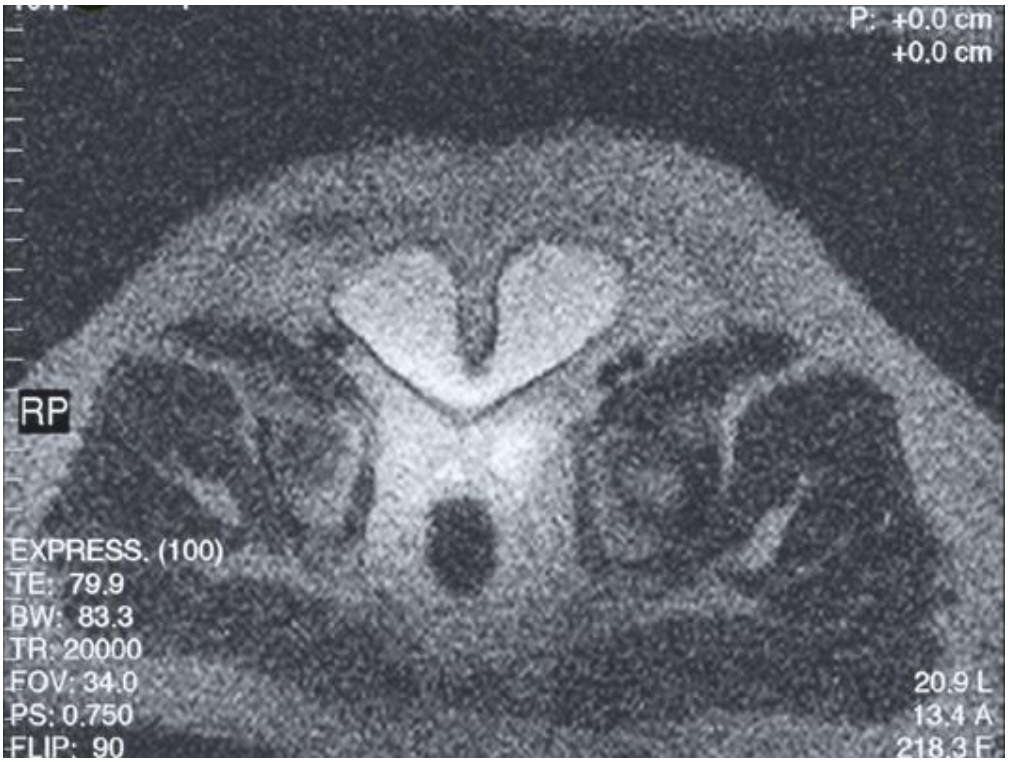

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Figure 3

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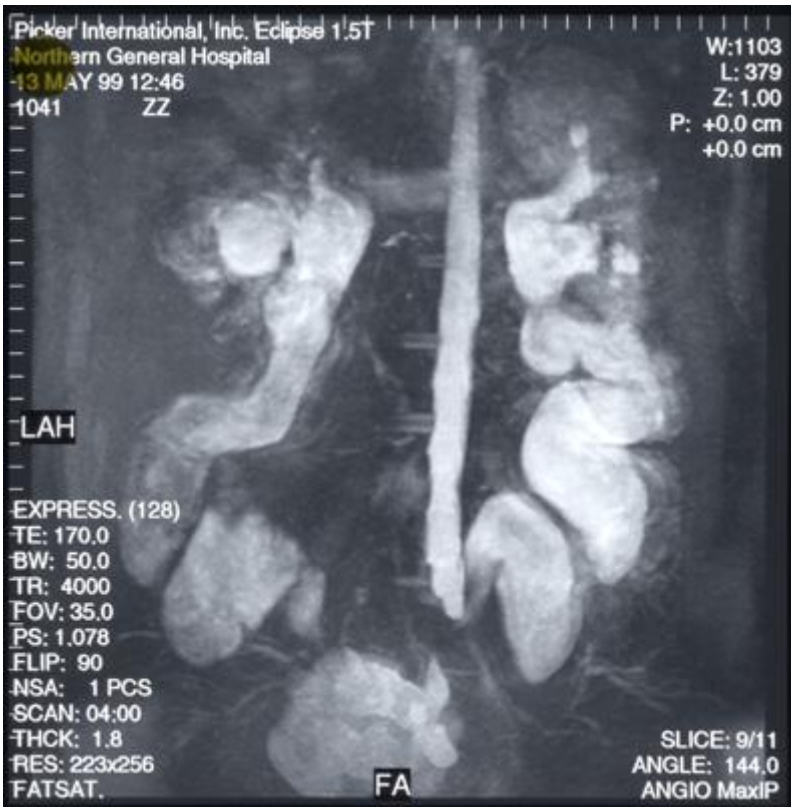

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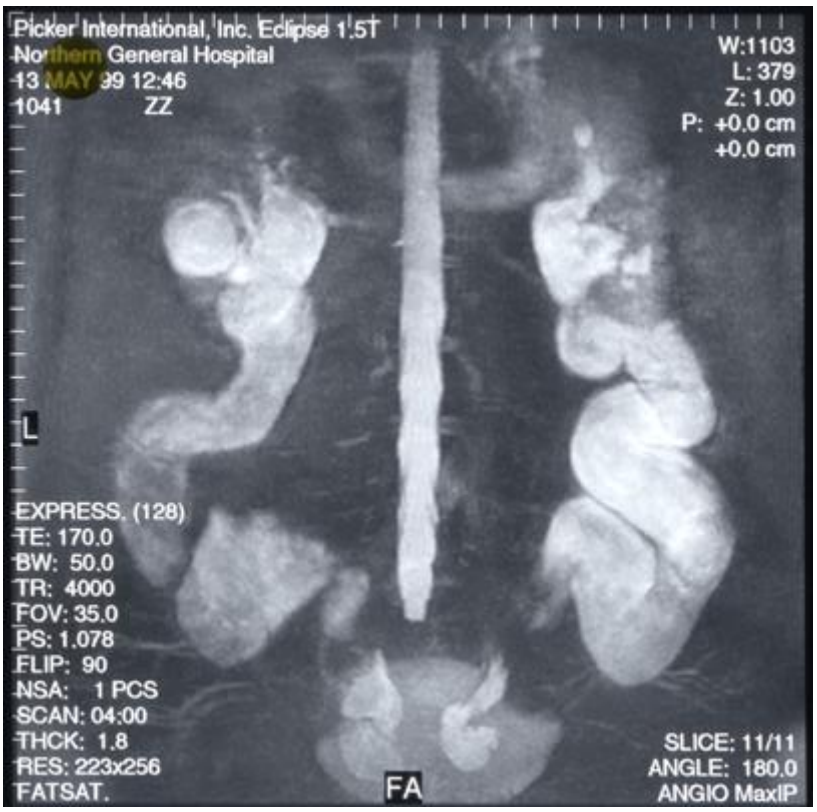

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