

Adult MR Urography Protocol (Abdomen+Pelvis)

Patient requirement/prep:

Drink ~ 1L of water, empty bladder before getting on table

IV Lasix 5-10mg (0.1mg/kg), No Lasix if: obstruction, anuria and hypersensitivity to furosemide, and electrolyte imbalance or hypotension should be corrected before administering furosemide. Patients who are allergic to sulfonamides may also be allergic to furosemid

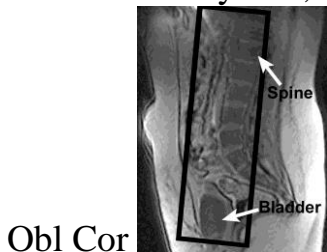
Gd 0.1 mmol/kg up to 20 cc, inject at 0.1 cc/sec + 12cc saline flush

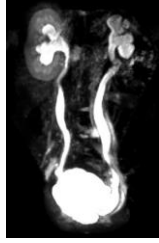
Pulse Sequences:

1. Ax FIESTA
 - a. Adrenals + kidney, slice/gap = 4-6/0-1, matrix = 256
2. Ax T1 in/out phase
 - a. adrenals + kidney, slice/gap = 4-6/0-1, matrix = 256
3. Ax T2 FRFSE with resp trig
 - a. adrenals + kidney, slice/gap = 4-6/0-1, matrix = 256
4. Obl Cor T2 FRFSE Fat-Sat with resp trig
 - a. kidneys + bladder, slice/gap = 4-6/0-1, matrix = 256
5. Obl Cor T2 SSFSE
 - a. kidneys + bladder, slice/gap = 4-6/0, matrix = 256
6. Ax DWI B=500, 50 kidney
7. If bladder mass: scan through pelvis
 - a. Ax T1 SE
 - b. Ax T2 FRFSE Fat Sat
 - c. Ax DWI B=500, 50 bladder

give Lasix IV

8. Obl Cor thick slab MRU
 - a. Kidney + bladder
9. Thin section 3D Asset Obl Cor MRU with resp trig
 - a. kidney + bladder
 - b. Use MRCP protocol
 - c. TR/TE = infinity/600, slice/gap = 1/0, matrix = 320





MRU

10. Pre-contrast Ax LAVA or 3D SPGR Fat-sat Kidney + bladder
11. Pre-contrast Obl Cor LAVA or 3D SPGR Fat-sat Kidney + bladder
12. Post-contrast **Multiphase** (20, 40, 60sec delay) Ax LAVA or 3D SPGR Fat-sat
 - a. Gd dose 0.1 mmol/kg, max 20ml
 - b. 12 ml saline flush
 - c. Injection rate **2** ml/s
 - d. Cover kidney to bladder
 - e. Slice/gap = 3/1, matrix = 256
13. Post Sag LAVA or 3D SPGR Fat-sat, kidney + bladder
14. Post Cor LAVA (3min, 5min delay), kidney + bladder