Postnatal imaging in newborns with fetally diagnosed high grade hydronephrosis

Prenatal US: gross dilatation = HN ≥ IV°

VCUG, in all boys particularly if ureter dilated
cce-VUS in girls, potentially delayed

early US + VCUG

PUV → drainage renal function? +isotopes *2, MRU *3

high grade VUR

obstructive uropathy

others *4

US follow-up 6 mo: isotopes *2, MRU *3?

UPJO, MU *5

as indicated *5

*1 (US) genitography: in patients with single kidney, MCDK, ectopic kidney, suspected genital anomaly ...
*2 MAG3 - better than DMSA in dilated systems and neonates, DMSA usually after > 3-6 months, not before 6 weeks; + open bladder catheter to avoid VUR induced errors
*3 MRU - complex anatomy, function, obstructive component ...
*4 e.g.: MCDK, cystic dysplasia, duplex or horseshoe kidney, other malformation, non-obstructive HN, cysts/cystic tu ...
*5 see respective algorithm

Pediatr Radiol 2009; 39