



REMARKS

1 Intravenous urogram (IVU)

- 1.1 IVU has no role in acute renal failure.

2 US

- 2.1 US should be the initial imaging study. It helps to differentiate potentially reversible acute renal failure from chronic end-stage renal disease. In cases of chronic renal failure, US can define the renal sizes and their echogenicity, presence of pelvicalyceal dilatation and cystic disease.
- 2.2 Colour Doppler US can be used to assess the renal arterial supply and venous drainage.

3 Nuclear medicine

- 3.1 Renal scan provides assessment of global and differential renal function which may reflect the potential reversibility of the renal failure. It is generally not useful in clinical decision making.

4 CT

- 4.1 CT is of value for ruling out stone disease, surveying the retroperitoneum for masses in patients with suspected post-renal cause of dysfunction.

5 MRI

- 5.1 In hypertensive patients or in those with extensive peripheral atherosclerotic vascular disease, magnetic resonance angiogram (MRA) with/without contrast is useful for detecting renal artery stenosis when duplex Doppler US is negative or non-diagnostic.

6 Pathological diagnosis

- 6.1 Percutaneous US-guided renal biopsy yields tissue for pathological examination in patients with intrinsic renal dysfunction, such as glomerular, vascular or tubulointerstitial diseases.

REFERENCES

1. Remer EM, Papanicolaou N, Casalino DD, et al. ACR Appropriateness Criteria® Renal Failure. Available at <https://acsearch.acr.org/docs/69492/Narrative/>. American College of Radiology. Accessed 2017 May 15.
2. Kidney Disease Improving Global Outcomes. KDIGO Clinical Practice Guideline for Acute Kidney Injury. Brussels: Kidney Disease Improving Global Outcomes; 2012.
3. Lorenz JM, Al-Refaie WB, Cash BD, et al. ACR Appropriateness Criteria® Radiological Management of Infected Fluid Collections. Available at <https://acsearch.acr.org/docs/69345/Narrative/>. American College of Radiology. Accessed 2017 May 15.
4. The Royal College of Radiologist. Standards for intravascular contrast administration to adult patients. 3rd ed. London: The Royal College of Radiologists; 2015.