Reviewer’s report

Title: Atherosclerotic ischemic renal disease. Diagnosis and prevalence in an elderly population.

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Reviewer: Dr DA Leung

Level of interest: A paper of considerable general medical or scientific interest

Advice on publication: Accept after discretionary revisions

Discretionary revisions
1. Last sentence of the Introduction is unclear since clinical and biochemical parameters do not detect renal artery stenosis. Should read something like: "The study is also aimed at comparing different diagnostic techniques for the detection of renal artery stenosis as well as clinical and biochemical indicators of renovascular disease.
2. What were the factors that influenced the decision to send the patient to ultrasound screening vs. scintigraphic screening vs. both. Any biases should be mentioned.
3. Very little detail is provided regarding the MRA technique compared with that of ultrasound and scintigraphy: e.g. sequence, imaging parameters, gadolinium dose, methods of image reconstruction (MIP, MPR)....
4. Were the demographics and clinical parameters comparable in patients undergoing ultrasound vs. scintigraphy?
5. In the first paragraph of page 10, the authors contend that MRA cannot be used for screening purposes because of factors such as claustrophobia, pacemakers etc. However, in a large population of patients, this typically accounts for maybe 5%, which is significantly less than the rate of non-diagnostic duplex scans at most institutions. Also, the statement that other techniques are "more simple and less expensive" than MRA has not been shown. Actually, I think most people who are familiar with all these techniques would consider MRA to simpler than both duplex and scintigraphy, and given its efficacy and speed, quite possibly more cost-effective. Indeed, MRA is a very useful screening test for renal artery stenosis and is being increasingly employed as such.
Compulsory revisions
6. DSA stands for digital subtraction angiography, not digital selective angiography.
7. Use unilateral instead of monolateral.
8. The 95% confidence intervals mentioned in the methods section are not reported in the results section. Also, it may be useful to show the sensitivity/specificity data in a table, including 95% CI.
9. The incidence of non-diagnostic renal duplex studies varies in the literature from about 5% to 40%, related non-visualization of the main renal arteries. The failure rate of ultrasound was not reported in this study. This should be included.

**Competing interests:**

None declared.