Harvard Medical School Department of Continuing Education and the Renal Division of Brigham and Women's Hospital

Nephrology Rounds
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Aldosterone/Mineralocorticoid Receptor in Chronic Kidney Disease and Metabolic Syndrome

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Objectives:

This issue of *Nephrology Rounds* will allow the reader to:

- Learn the clinical and experimental evidence for the pathogenic role of aldosterone in the progression of proteinuria and chronic kidney disease (CKD)
- Know the results of clinical trials assessing the efficacy and safety of mineralocorticoid receptor (MR) antagonists and their meta-analysis in CKD
- Understand the importance of podocyte injury in the pathogenesis of proteinuria associated with lifestyle-related disease
- Learn that MR in the target organ can be activated in patients with normal or even low plasma aldosterone concentrations
- Understand the postulated mechanisms linking the metabolic syndrome to CKD, and possible roles of MR activation and fat-derived factors

Questions:

1. The anti-proteinuric effect of MR antagonists in patients with CKD was shown by meta-analysis.

   True ❑ False ❑

2. MR antagonists are efficacious only in patients with high aldosterone concentrations.

   True ❑ False ❑

3. MR antagonists are contraindicated in patients with aldosterone breakthrough.

   True ❑ False ❑

4. Weight reduction, salt restriction, MR antagonists, and antioxidants may be renoprotective in patients with the metabolic syndrome.

   True ❑ False ❑

5. Several clinical studies have demonstrated that the metabolic syndrome increases the risk of albuminuria and/or CKD.

   True ❑ False ❑

6. The glomerular mesangial cell is a component of the glomerular filtration barrier, and its injury is a major cause of proteinuria.

   True ❑ False ❑

7. Foot-process effacement of the podocyte is the result of a fusion of the neighboring foot processes, and cannot be reversed by therapy.

   True ❑ False ❑

8. Adrenal aldosterone production is regulated not only by angiotensin II, but also by various factors, including hyperkalemia and adipocyte-derived factors.

   True ❑ False ❑

9. Serum potassium should be monitored, especially when an MR antagonist is co-administered with an angiotensin-converting enzyme (ACE) inhibitor and/or an angiotensin-receptor blocker (ARB) because hypokalemia is a major concern.

   True ❑ False ❑

10. High plasma aldosterone concentrations in metabolic syndrome patients may not be corrected by ACE inhibitors or ARBs.

    True ❑ False ❑

11. This issue of *Nephrology Rounds* adequately addressed the topic, and the data and discussion were fair and balanced.

    AGREE ❑ DISAGREE ❑

12. Potential conflicts of interest disclosed by the author on the back page were properly expressed.

    AGREE ❑ DISAGREE ❑

13. The information presented in this issue of *Nephrology Rounds* will increase my clinical knowledge and improve the care of my patients.

    AGREE ❑ DISAGREE ❑

14. *Nephrology Rounds* from Brigham and Women's Hospital and Harvard Medical School is an effective CME program.

    AGREE ❑ DISAGREE ❑

Comments/Topic Suggestions: _____

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To receive AMA category 1 credit, you must correctly answer 60% of questions 1-10, and answer 11-14.

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