

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



Nephrology Rounds
February 2008

Aristolochic Acid (Chinese-Herb) Nephropathy

By **Huong Thi Bich Tran, MD**, and **Li-Li Hsiao, MD, PhD**

Objectives

This issue of *Nephrology Rounds* will help readers to critically review:

- clinical presentations, pathological patterns, and treatment options in aristolochic acid nephropathy (AAN)
- the pathophysiology of AA-induced nephrotoxicity
- mechanisms of AA-associated carcinogenesis
- current difficulties with issues of federal regulation and monitoring of herbal medicines

Questions:

1. In the United States, the uses of herbal and dietary supplements have grown faster than any other complementary and alternative treatments.

True False

2. In the outbreak of renal tubulointerstitial disease in Belgium, tetrandrin, the alkaloid of *Stephania tetrandra*, a Chinese herb in a weight-loss regimen, was found to be the causative agent of the outbreak.

True False

3. The small incidence of AAN (3%-5%) may be due to individual endogenous metabolic variation in the enzymatic activities of AA.

True False

4. Mutagenic and carcinogenic effects of AA are associated with the formation of AA-induced deoxyribonucleic acid adducts.

True False

5. Patients with AAN commonly present with anemia that is more severe than the degree of renal failure.

True False

6. Individuals presenting with AAN have significantly shortened serum creatinine doubling time and faster progression to end-stage renal disease when compared with other tubular interstitial nephropathies.

True False

7. The pathology of AAN is characterized by extensive interstitial fibrosis and tubular atrophy with an intensity that is more severe in the inner cortex and medulla than the outer cortex.

True False

8. Patients with AAN usually present with severe proteinuria.

True False

9. Removal of native kidneys and ureters during or after renal transplantation, followed by a frequent urinary cytological evaluation and surveillance cystoscopy are recommended in all AAN patients.

True False

10. Angiotensin-converting enzyme (ACE) inhibitors or angiotensin-receptor blockers (ARBs) may slow the disease progression in AAN patients with renal failure.

True False

To receive AMA category 1 credit, you must correctly answer 60% of the test questions.

Harvard Medical School is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Harvard Medical School designates this educational activity for a maximum of 1 AMA PRA Category 1 credit.[™] Physicians should only claim credit commensurate with the extent of their participation in the activity.

This program was issued in February 2008. All tests must be returned by June 30, 2008.

Please send completed test and a check for \$25 U.S. (Check made payable to Harvard Medical School) to: Harvard Medical School/Department of Continuing Education,
Box 825, Boston, MA 02117-825.

Please keep a copy of your test before submission. A certificate will be sent upon successful completion of the test along with the answer key after the deadline date indicated.

Name: _____

Address: _____

Phone: _____

Email: _____

Fax: _____