Recent media reports have focused on the U.S. Food and Drug Administration's (FDA's) medical review of unblinded data from this study, in which the FDA reviewer commented that the death of 1 patient in the rofecoxib group, which the investigator had listed as from "hypertensive heart disease" on the basis of autopsy findings, was, in the FDA reviewer's opinion, a case of sudden death. Although the term retrospectively proposed by the FDA reviewer would have met criteria as a potential thrombotic event eligible for adjudication if used by the investigator, the term *hypertensive heart disease* did not trigger adjudication in the existing standard operating procedure. Therefore, this case was not prospectively adjudicated and is not included as a confirmed thrombotic event in **Table 1**. However, on the basis of internal blinded review, it was determined prospectively that this patient's death met the criteria of the APTC combined end point, and as shown in **Table 2**, this patient's death *was* included in the combined APTC end point in the article by Lisse and colleagues (1). It was also included in the pooled analyses of cardiovascular events with rofecoxib published by Konstam and associates (4) and Weir and coworkers (5).

Ned Braunstein, MD
Adam Polis, MA
Merck & Co., Inc.
Rahway, NJ 07065-0900

Potential Financial Conflicts of Interest: Dr. Braunstein and Mr. Polis are employed by Merck & Co., Inc. and own shares of Merck & Co., Inc., stock.

References

1. Lisse JR, Perlman M, Johansson G, Shoemaker JR, Schechtman J, Skalky CS, et al. Gastrointestinal tolerability and effectiveness of rofecoxib versus naproxen in the treatment of osteoarthritis: a randomized, controlled trial. Ann Intern Med. 2003;139:539-46. [PMID: 14530224]

2. FDA Advisory Committee Background Information. Presented to Arthritis Advisory Committee. 8 February 2001. Accessed at www.fda.gov/ohrms/dockets/ac/01/briefing/3677b2_01_merck.pdf on 9 June 2005.

3. Collaborative overview of randomised trials of antiplatelet therapy—I: Prevention of death, myocardial infarction, and stroke by prolonged antiplatelet therapy in various categories of patients. Antiplatelet Trialists' Collaboration. BMJ. 1994;308:81-106. [PMID: 8298418]

4. Konstam MA, Weir MR, Reicin A, Shapiro D, Sperling RS, Barr E, et al. Cardiovascular thrombotic events in controlled, clinical trials of rofecoxib. Circulation. 2001;104:2280-8. [PMID: 11696466]

5. Weir MR, Sperling RS, Reicin A, Gertz BJ. Selective COX-2 inhibition and cardiovascular effects: a review of the rofecoxib development program. Am Heart J. 2003;146:591-604. [PMID: 14564311]

CLINICAL OBSERVATION

Myocarditis from the Chinese Sumac Tree

TO THE EDITOR: *Background:* Myocarditis is commonly assumed to be infectious in origin in many patients who present to the emergency department with chest pain, depressed ejection fraction, and a history compatible with a viral syndrome. Certain naturally occurring products, such as quassinoids in tree sap, may also cause myocarditis.

Objective: To describe a case of myocarditis likely due to exposure to sap from the Chinese sumac tree (*Ailanthus altissima*).

Case Report: A previously robust, healthy 24-year-old man presented to the emergency department reporting 3 days of fever and chills associated with epigastric pain, substernal chest pressure that radiated to both arms, and shortness of breath. Up to the day of admission, he had been working as a tree surgeon on a team responsible for clearing heavy areas of Chinese sumac, also known as tree-of-heaven. Physical examination showed a blood pressure of 93/59 mm Hg, a heart rate of 60 beats/min, a temperature of 38.5 °C, and no other significant findings. Laboratory tests revealed a troponin T level of 1.8 μg/L and a creatine kinase level of 523 U/L, which had 11% MB; the remainder of the laboratory tests, including blood cultures, yielded normal results. An electrocardiogram showed diffuse 1-mm ST-segment elevation. Emergency department evaluation with computed tomography ruled out aortic dissection and pulmonary embolism, and the patient was treated with morphine and nonsteroidal anti-inflammatory drugs for presumed pericarditis or myocarditis. Initial echocardiography showed an ejection fraction of 0.42, and results of subsequent coronary angiography were normal.

The patient's pain intensified substantially over the next 48 hours, but then rapidly abated. He was taking only low-dose ibuprofen when discharged, and his discharge echocardiogram showed an ejection fraction of 0.5. On a return clinic visit, the patient reported that all of his coworkers had also been ill at the time of his hospitalization, many with gastrointestinal symptoms and some with chest pain. He expressed concern that they may not have exercised proper caution while clearing Chinese sumac, since, he said, "the sap on that tree will make you sick." One year later, the patient's cardiac function remains normal, he is taking no medications, and he has resumed his normal active lifestyle.

Discussion: Review of the literature shows that the sap of the Chinese sumac may contain proteins, called quassinoids, that can explain our patient's cardiac findings, the illness of his coworkers, and the perceived need among arborists for caution while handling the Chinese sumac (1). The tree-of-heaven, as it is commonly known, is a tree of the sumac family that is native to China. Initially brought to the United States because of its ease of rapid growth and its medicinal implications, this tree has become very common in all areas of the country, particularly the northeastern states. The bark of the tree-of-heaven has been used as an herbal remedy for dysentery and, more recently, for malaria (2). Among its many implications derived from folk medicine, the *Ailanthus altissima* is thought to be a cardiac depressant and has been used to slow heart rate. Researchers have proposed that quassinoids may have a role in treating Epstein–Barr virus infection (3), HIV infection (4), and neoplasms, possibly by depolarization of mitochondrial membranes (5).

Conclusion: Because Chinese sumacs spread rapidly and continuously, they often need to be eliminated, posing a health concern for the professionals who remove them. Our patient was exposed to sumac sap through ruptured blisters due to rope burn, which resulted in loss of the protective epithelium. Recent literature indicates that this toxin may have mitochondrial mechanisms of action consistent with the pathophysiologic characteristics of transient myocarditis. This case describes an unusual cause of myocarditis in a previously healthy person and illustrates the importance of taking a thorough occupational history from patients who work in the tree removal industry.

John D. Bisognano, MD, PhD
Kevin S. McGrody, MD
Abraham M. Spence, BA
University of Rochester Medical Center, Strong Memorial Hospital
Rochester, NY 14642

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References

1. Joshi BC, Pandey A, Sharma RP, Khare A. Quassinoids from *Ailanthus excelsa*. Phytochemistry. 2003;62:579-84. [PMID: 12560029]
2. Okunade AL, Bikoff RE, Casper SJ, Oksman A, Goldberg DE, Lewis WH. Antiplasmodial activity of extracts and quassinoids isolated from seedlings of *Ailanthus altissima* (Simaroubaceae). Phytother Res. 2003;17:675-7. [PMID: 12820239]
3. Tamura S, Fukamiya N, Okano M, Koyama J, Koike K, Tokuda H, et al. Three new quassinoids, ailantinol E, F, and G, from *Ailanthus altissima*. Chem Pharm Bull (Tokyo). 2003;51:385-9. [PMID: 12672989]
4. Chang YS, Woo ER. Korean medicinal plants inhibiting to human immunodeficiency virus type 1 (HIV-1) fusion. Phytother Res. 2003;17:426-9. [PMID: 12722157]
5. Rosati A, Quaranta E, Ammirante M, Turco MC, Leone A, De Feo V. Quassinoids can induce mitochondrial membrane depolarisation and caspase 3 activation in human cells [Letter]. Cell Death Differ. 2004;11 Suppl 2:S216-8. [PMID: 15608695]

Correction

Correction: A New Concept of Unopposed β-Adrenergic Overstimulation in a Patient with Pheochromocytoma

A recent letter on a new concept of unopposed β-adrenergic overstimulation (1) contained errors. In the Background section, the first sentence should have read, "The concept of unopposed α-adrenergic overstimulation during selective β-adrenergic blockade in patients with pheochromocytoma is well recognized." In the Discussion section, the second and third sentences should have read as follows: "In cases of catecholamine excess, selective α-adrenergic blockade will shift all available amounts of catecholamines to the β-adrenergic receptor compartment, enabling selective β-adrenergic overstimulation concurrently with α-adrenergic blockade. In contrast to unopposed α-adrenergic stimulation (as in the case of selective β-blockade), where the main clinical picture is one of severe peripheral vasoconstriction, unopposed β-adrenergic blockade will show opposite features."

Reference

1. Kantorovich V, Pacak K. A new concept of unopposed β-adrenergic overstimulation in a patient with pheochromocytoma. Ann Intern Med. 2005;143:1026-8.