



Pathology/Biology Section - 2016

H105 Case Report: Fatal Use of a Suspected Herbal Medication

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After attending this presentation, attendees will better understand the work-up of a suspected herbal medicine death.

This presentation will impact the forensic science community by increasing awareness of herbal medicine deaths in a time when herbal medication use is increasing.

Herbal medications fall into the category of traditional medicine. According to the World Health Organization, traditional medicine is “sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness.”¹ This may also include terms such as complementary and alternative medicine. Herbal medicines have been in existence for thousands of years, are widely used, and generally thought of as safe by the public. Approximately 30% of patients use some sort of herbal medication for various reasons, such as a holistic approach, improving their health, and relieving symptoms from other medications.²

Herbal medicines do not require approval from the Food and Drug Administration and are regarded as “dietary supplements” so they are “presumed safe,” unlike pharmaceutical medications which undergo a more vigorous approval process. The manufacturer is required to list the ingredients of the herbal medication on the label and is furthermore in charge of making sure the product is safe for consumption.³ According to the *New England Journal of Medicine*, approximately 70% of patients that ingest herbal medicines do not routinely tell their doctors they are taking an herbal medication, which could possibly result in deadly interactions between prescription medications and the herbal medication.⁴ In the forensic pathology setting, this can result in problems of lack of a full medication knowledge which can hinder toxicology testing. Toxicology does not routinely test for herbal medications and additional testing may need to be requested. If the herbal medication is known, detection may still prove to be difficult because the levels of lethality are mainly unknown, with some levels being too low to be detected.

The case study of an 18-year-old Hmong woman who was two months postpartum from her fourth pregnancy will be presented. The Hmong culture uses many different plants as traditional medicines, some of which can be used as oral contraceptives. This is thought to have been the objective in this case. The internal examination was significant for diffuse pink bodily discoloration. Extensive toxicology testing was performed including organic acids, organic bases, organic neutrals, cyanide, and rhodamine-B. This presentation highlights the difficulties associated with a suspected herbal medicine death.

Reference(s):

1. “Traditional Medicine: Definitions.” WHO. N.p., n.d. Web. 18 July 2015.
2. Byard, Roger W. “A Review of the Potential Forensic Significance of Traditional Herbal Medicines.” *Journal of Forensic Sciences* 55.1 (2010): 89-92.
3. “U.S. Food and Drug Administration.” Questions and Answers on Dietary Supplements. N.p., n.d. Web. 18 July 2015.
4. Eisenberg, David M., Ronald C. Kessler, Cindy Foster, Frances E. Norlock, David R. Calkins, and Thomas L. Delbanco. “Unconventional Medicine in the United States — Prevalence, Costs, and Patterns of Use.” *New England Journal of Medicine* 328.4 (1993): 246-52.

Herbal Medicine, Rhodamine-B, Forensic Science