



Poison HOTLINE

Partnership between Iowa Health System and
University of Iowa Hospitals and Clinics

January, 2010



Did you know

Red kidney beans contain phytohemagglutinin, a chemical that is present in high amounts in the raw or undercooked beans. Phytohemagglutinin is found in many species of beans, but it is in highest concentration in red kidney beans. Ingestion of as few as four or five raw or undercooked red kidney beans can cause severe nausea, vomiting, diarrhea and abdominal pain. Symptoms usually resolve within several hours after onset. Boiling the beans for 10 minutes destroys the phytohemagglutinin chemical.

Visit us online at
www.iowapoisson.org.

SEROTONIN SYNDROME

Serotonin syndrome is a disorder that is caused by an increase in serotonin levels. It most often occurs when two or more drugs, each of which increases serotonin levels by different mechanisms, are used simultaneously. Similarly, the more severe cases tend to result from drug interactions, especially when a monoamine oxidase inhibitor is involved. Serotonin syndrome may develop after therapeutic use of medications or after an overdose.

The Hunter serotonin toxicity criteria use the following decision rules to predict serotonin toxicity:

Following the use/overdose of a serotonergic agent, a diagnosis of serotonin toxicity can be made if any of the following criteria are met:

- If the patient has spontaneous clonus.
- If the patient has inducible clonus AND agitation OR diaphoresis.
- If the patient has ocular clonus AND agitation OR diaphoresis.
- If the patient has tremor AND hyperreflexia.
- If the patient is hypertonic AND has a temperature greater 38 degrees C AND ocular clonus OR inducible clonus.

A "Yes" decision for any of these rules suggested serotonin toxicity of sufficient clinical significance that the clinician should consider treating the patient with a specific 5-HT_{2A} antagonist. There is no test that confirms the diagnosis of serotonin syndrome. Serum electrolytes, glucose, renal function tests, CK and an ECG are recommended in all patients with suspected serotonin syndrome. Obtain liver function tests, PT/PTT or INR, platelets, and arterial blood gases in patients with severe hyperthermia, hypotension or other severe effects.

Cyproheptadine has been used in the treatment of serotonin syndrome, and should be used in any patient with severe manifestations (core temperature > 38.5°C or severe muscle rigidity).

Many drugs have caused serotonin syndrome and a partial list includes: SSRIs, MAOIs, tricyclic antidepressants, L-tryptophan, cocaine, trazadone, buspirone, L-dopa, LSD, amphetamines, MDMA (Ecstasy), lithium, dextromethorphan, venlafaxine and meperidine. For questions regarding serotonin syndrome and its management, please call Iowa Statewide Poison Control Center at 1-800-222-1-222.

*Pat Gunia RN, BSN, CSPI
Certified Specialist in Poison Information*

POISON
Help
1-800-222-1222

Post and share this edition of **Poison Hotline** with your colleagues. Send comments or questions to Poison Hotline, 712-234-8775 (fax) or nobletf@ihs.org. To subscribe or unsubscribe from this distribution list, contact the Iowa Poison Center education office at 712-279-3717. Read past issues of **Poison Hotline** at www.iowapoisson.org.