Malignant Ventricular Arrhythmias due to 
Aconitum napellus Seeds

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A 28-year-old man was admitted to the Emergency Department for syncope after several hours of violent vomiting and diarrhea. A few minutes after arrival, he complained of palpitations followed by a sudden loss of consciousness. An ECG showed a polymorphic ventricular tachycardia degenerating into ventricular fibrillation (Figure 1). Because of recurrent major ventricular arrhythmias, resuscitation was necessary for 1 hour. The patient was eventually admitted to the Coronary Care Unit. Physical examination, ECG (Figure 2), chest x-ray, echocardiogram, and routine blood chemistry were all normal. A history of a previous suicide attempt with rat poison was discovered, and a small bag of Aconitum napellus (wolfsbane, monkshood) seeds was found in the patient’s trousers. After several psychiatric assessments, the patient confessed to ingesting an unknown amount of these seeds for a suicidal purpose.

Aconitum napellus is a beautiful plant with blue or purple flowers (Figure 3). It can be found throughout the world, and it has long been known to be a poison.1 The roots and seeds are freely sold on the herb market for treating musculoskeletal pain. They contain highly toxic C-19 diterpene and norditerpene alkaloids of aconitine, mesaconitine, and the less toxic hypaconitine; these compounds activate voltage-dependent Na\(^+\)-channels in the heart and brain.2,3 The margin of safety between analgesic and toxic doses is very low. In the past, the plant was implicated in some cases of murder. Typical manifestations of poisoning are gastrointestinal, neurological, and cardiovascular, with malignant ventricular arrhythmias.4 Treatment is essentially supportive. No gross or histological cardiac abnormalities have been observed in the few autopsied cases.5 The problem of unregulated herb selling is now under discussion in the Italian Parliament. A new law will soon be passed to regulate herb selling.

References
Figure 1. A, Polymorphic ventricular tachycardia recorded a few minutes after patient’s arrival. B, Coarse ventricular fibrillation.

Figure 2. Baseline ECG was normal after admission to Coronary Care Unit.

Figure 3. Flowers of Aconitum napellus. The plant is found throughout the world.
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