



The White Panther – Rare exposure to *Amanita multiquamosa* causing clinically significant toxicity

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LETTER TO THE EDITOR



The White Panther – Rare exposure to *Amanita multisquamosa* causing clinically significant toxicity

To the Editor,

The mushroom genus *Amanita* includes over 200 North American species. Some are edible, however some are toxic and potentially fatal if ingested [1]. *Amanita multisquamosa* is known as the “white panther” or “small funnel-veil *Amanita*” [2]. We present a rare case of toxicity from confirmed *Amanita multisquamosa* ingestion.

A 30-year-old female, with no past medical history and no prescribed medications, presented with altered mental status approximately 6 h after cooking and ingesting an unknown quantity of a mushroom species she foraged. Her spouse stated she was the only individual to consume the mushroom. Upon presentation to the emergency department, she vomited once. On physical exam, she was drowsy, ataxic, and incoherent, opening her eyes to verbal commands but becoming increasingly somnolent, responsive only to sternal rub. Her initial vital signs and laboratory results were unremarkable. Urine drug screen and acetaminophen, aspirin, and ethanol concentrations were negative. Her electrocardiogram showed a second-degree atrioventricular (Mobitz type I) heart block with heart rate between 30 and 40 beats-per-minute but no hypotension. She was admitted to the intensive care unit for monitoring. She returned to normal sinus rhythm with no further conduction abnormalities. She received a 21-h course of intravenous N-acetylcysteine, milk thistle extract 50 mg/kg/day in four divided doses and activated charcoal both *via* nasogastric tube due to suspicion of amatoxin exposure. Repeat vital

signs and labs remained unremarkable. Her mental status started improving 14 h post-exposure. She was discharged on hospital day two.

Mushroom specimens were sent to mycologists at Cornell University for analysis, including examination of macroscopic features like stature, odor, pale brown cap with a darker center and striate margin, pale prominent warts, and truncate lamellulae (Figure 1). With diagnostic features of the annulus and base of the stem missing, microscopic characteristics were essential to support identification. All mushroom samples belonged to the same species and were deposited at the Cornell Plant Pathology Herbarium as CUP-070735.

Amanita multisquamosa is found in Eastern North American forests ranging from Eastern Canada to Florida [2]. It differs from other *Amanita* species in its white cap with long marginal striations and white to tan to brown center, funnel-like annulus, and rolled-sock volva [2]. Identification warrants expert confirmation.

Scant literature exists surrounding *Amanita multisquamosa* exposures. Toxicity has been compared to *Amanita muscaria* ingestion, with primarily neurological features and mild gastrointestinal (GI) effects [2,3]. Previous cases include a Canadian family who experienced GI symptoms and demonstrated erratic behavior three hours after eating cooked specimens, resembling *Amanita muscaria* toxicosis [3]. High concentrations of ibotenic acid and muscimol have been found in *Amanita multisquamosa* samples, supporting comparisons to *Amanita muscaria* [4]. Ibotenic acid exerts excitatory central nervous system (CNS) effects while muscimol produces CNS depression [5]. Symptoms may appear within 30–120 min and can last 10–24 h [4,5]. Symptomatic and supportive care is indicated [5]. Our patient had a cardiac conduction abnormality of unknown etiology. Comprehensive molecular characterization of other toxins in *Amanita multisquamosa* has not been elucidated, therefore this exposure cannot be ruled out as a potential cause.

Our case involved a rare exposure to *Amanita multisquamosa* resulting in clinically significant neurological toxicity.

Disclosure statement

No potential conflict of interest was reported by the author(s).



Figure 1. Mushroom samples received for identification at the Cornell Plant Pathology Herbarium (scale bar bottom right, 10 mm).

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