

Out of the cupboard and into the clinic: Nutmeg-induced mood disorder

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Clinicians often are unaware of a patient’s misuse or abuse of easily accessible substances such as spices, herbs, and natural supplements. This can lead to misdiagnosed severe psychiatric disorders and, more alarmingly, unnecessary use of long-term psychotropics and psychiatric services.

Excessive ingestion of nutmeg (*Myristica fragrans*) can produce psychiatric symptoms because it contains myristicin, a psychoactive substance, in its aromatic oil.¹ It is structurally similar to other hallucinogenic compounds such as mescaline. The effects of nutmeg could be attributed to metabolic formation of amphetamine derivatives from its core ingredients: elemicin, myristicin, and safrole.¹⁻³ However, neither amphetamine derivatives nor core ingredients are detected in the urine of patients suspected of abusing nutmeg, which makes diagnosis challenging.

We present a case of nutmeg abuse leading to psychotic depression.

Nutmeg and depression

Mr. D, age 50, is admitted to our inpatient psychiatric unit with severe dysphoria, hopelessness, persecutory delusions, suicidal ideation, and a sense of impending doom for the third time in 2 years. At previous admissions, he was diagnosed with bipolar disorder.

During his first admission, Mr. D reported an intentional overdose by water intoxication; laboratory studies revealed hyponatremia, liver dysfunction, abnormal cardiac markers, increased creatine kinase, and leukocytosis with neutrophilia. With supportive treatment, all param-

Table 1
Effects of chronic nutmeg abuse

Anxiety
Apprehension
Confabulation
Detachment
Euphoria
Giddiness
Hallucinations
Sense of “impending doom”
Source: References 2,3

eters returned to the normal range within 7 days.

At his third admission, Mr. D describes an extensive history of nutmeg abuse. He reports achieving desirable psychoactive effects such as excitement, euphoria, enhanced sensory perceptions, and racing thoughts within a half hour of ingesting 1 teaspoon (5 g) of nutmeg; effects lasted for 6 hours. He reports that consuming 2 teaspoons (10 g) produced a “stronger” effect, and that 1 tablespoon (15 g) was associated with severe dysphoria, fear, psychosis, suicidal ideation, and behavior, which led to his psychiatric admissions. He denies any other substance use.

Urine drug screen and other routine laboratory investigations are negative. Symptoms resolve spontaneously within 3 days and he is managed without pharmacotherapy. The diagnosis is revised to substance-induced mood disorder with psychotic features. We provide psychoeducation about nutmeg’s psychoactive effects, and Mr. D is motivated to stop abusing nutmeg. Three years later he remains in good health.

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Because nutmeg contains myristicin, excessive ingestion can produce psychiatric symptoms

Table 2

Physical effects of nutmeg abuse

Acute
Blurred vision Headache Nausea and vomiting Paresthesias Polydipsia
Long-term
Cardiac toxicity Fatty degeneration of the liver
Source: Reference 2

Effects of nutmeg

Acute nutmeg intoxication produces anxiety, fear, and hallucinations, and generally is self-limited, with most symptoms resolving within 24 hours.² Chronic effects of nutmeg abuse resemble those of mari-

juana abuse (*Table 1*). Acute and long-term physical effects are listed in *Table 2*.

Be alert for presentations of a ‘natural high’

Nutmeg, other spices, and herbs can be used by persons looking for a “natural high”; as we saw with Mr. D, nutmeg abuse can present as a mood disorder resembling bipolar disorder. An acute, atypical presentation of mood changes or suicidal ideation should prompt you to investigate causes other than primary mood or psychotic disorders, and should include consideration of the effects of atypical drugs—and spices—of abuse.

References

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