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Mushroom Poisoning Imitating Stroke. Report of a Case and Review of the Literature

Strok'u Taklit Eden Mantar Zehirlenmesi. Olgu Sunumu ve Literatürün Gözden Geçirilmesi

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ABSTRACT

Mushroom poisoning has an important place in the poisonings applied to emergency department (ED). Patients may present with different toxoids according to the fungus and toxin fecalin. Pantherina syndrome is a tablature that can interfere with cerebrovascular diseases due to clinical presentation. Three patients from the same family were admitted to our ED with newly developed symptoms of confusion, aphasia and mydriasis. When the first patient was evaluated, the diagnosis of hypertensive encephalopathy was first considered with the current symptoms. However, after the application of the second and third patients with similar symptoms, the anamnesis was deepened and the story of eating a mushroom was questioned. Patients are treated in the emergency ICU. Two patients recovered within 24 hours, and the symptoms of one patient continued for up to 72 hours. Pantherina syndrome is a toxicoma characterized by early onset, confusion, neurological symptoms such as aphasia and mydriasis. Treatment is generally supportive treatment. Stomach lavage and activated charcoal will be useful in the early period. Benzodiazepines can be used in extreme agitation. Pantherina syndrome is one of the diagnoses that clinicians should actually have in patients presenting with an acute confusional condition.

Key Words: Poisoning, stroke, emergency department

ÖZET

Mantar zehirlenmeleri günlük acil servis pratik uygulamasında zehirlenmeler içinde önemli bir yere sahiptir. Hastalar mantara ve toksinin türüne göre farklı klinik tablolar ile hastaneye başvurabilirler. Pantherina sendromu, serebrovasküler hastalıklarla karışabilen bir klinik tablodur. Aynı aileden üç hasta, yeni gelişen bilinç bulanıklığı, afazi ve midriyazis belirtileri ile acil servise başvurdu. İlk hasta değerlendirildiğinde, mevcut semptomlarla birlikte hipertansif ensefalopati tanısı konuldu. Bununla birlikte, benzer semptomlara sahip ikinci ve üçüncü hastada anamnezin derinleştirilmesi ile mantar yemekten kuşkulanıldı. Hastalar acil yoğun bakım ünitesinde tedavi edildi. İki hasta 24 saat içinde düzeldi ve bir hastanın semptomları 72 saate kadar devam etti. Pantherina sendromu erken başlangıçlı, konfüzyon, afazi ve midriyaz gibi nörolojik semptomlarla karakterize bir klinik durumdur. Tedavi genellikle destek tedavisidir. Mide yıkama ve aktif kömür erken dönemde faydalı olacaktır. Benzodiazepinler aşırı ajitasyon durumunda kullanılabilir. Pantherina sendromu, akut konfüzyonel bir durumla başvuran hastalarda klinisyenlerin düşünmesi gereken tanılardan biridir.

Anahtar Kelimeler: Zehirlenme, strok, acil servis

Introduction

Mushrooms are commonly found in the nature. After the mushrooms are consumed as nutrients by human beings, the number of patients who require urgent care and treatment due to poisoning is very high. According to the data of the National Poison Information Center, food poisonings are seen as 3.3%, and most of these poisonings (43%) are caused by mushrooms (1,2). Clinical findings due to mushroom poisoning (MP) may occur as early as the first three hours after toxin ingestion or may occur later (3). Patients with MP may present to Emergency departments (EDs) with general symptoms like nausea, vomiting and abdominal pain (4). According to the type of toxin involved by mushroom, patients may present with different

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Table 1. Signs and symptoms recorded in cases whith mushroom poisoning

	Case 1	Case 2	Case 3
Age/Sex	69/female	70/male	27/female
Arteriel Tension	190/110	120/80	120/70
Glasgow Coma Score (GCS)	12	12	14
Onset from Intake (Hour)	2 hours	4 hours	4 hours
Abdominal Pain	-	-	-
Vomiting	-	-	-
Diarhea	-	-	-
Confussion	+	+	+
Lisping	+	-	-
Meaningless Speech	-	-	+
Aphasia	-	+	-
Light Reflex	+	+	+
Midriasis	+	+	+
Blurred Vision	+	+	+
Sweating	-	-	-
Lacrimation	-	-	-
Salivation	-	-	-
Fasciculation	-	-	-
Weakness	+	+	+
Bronchorea	-	-	-
Coughing	-	-	-
Bradicardia	-	-	-
Hypothermia	-	-	-

clinical signs and syndromes (pantherina syndrome; coprinus syndrome; paxillus syndrome; etc.) (5).

Our aim in presenting this case report is to emphasize that MP can lead to serious clinical findings and that monitorization and treatment of these patients in intensive care conditions will affect the prognosis positively.

Case Report

This case report was conducted with three members of the same family who were referred to the ED with unconsciousness, speech impairment and muscarinic poisoning symptoms. When the symptoms and physical examination findings of the first patient were evaluated, a preliminary diagnosis of cerebrovascular disease was considered. After the arrival of second and third patients with similar symptoms, the anamnesis was elaborated and the story of mushroom consumption was obtained. Based on the present history and findings of the patients and the diagnosis of pantherina syndrome were considered. The patients were admitted to the emergency intensive care unit and treated. In two patients, symptoms resolved within the first 24 hours, and the patients were discharged after 24 hours of follow-up. Symptoms lasted up to 72 hours in a patient. All three patients were discharged with full recovery. The findings of the patients are shown in table 1.

Discussion

Mushroom poisoning usually results from the consumption of mushrooms collected from the environment, less frequently, the consumption of poisonous mushrooms for suicide (6). Our patients also applied to the ED with symptoms that developed after having an evening meal prepared with a mushroom canister taken from the market. The common symptoms in MP are gastrointestinal symptoms such as nausea, vomiting, diarrhea, abdominal pain. Various neurological symptoms can also be seen according to the toxin type contained in the mushroom. The time from when the mushroom is eaten to the

appearance of the symptoms is important in determining the prognosis of poisoning. It is thought that organ damage does not occur in patients who develop symptoms within the first 4 hours and prognosis is good (7). Case 1 developed symptoms after 2 hours of consumption, case 2 and case 3 developed symptoms after 4 hours and all three of our patients recovered without sequelae. The type of mushroom, the patient's previous health status, and the quality of the treatment given are other factors that affect prognosis (8).

Musimol and ibotenic acid are members of the toxin family known as isoxazoles. Amanita muscarina and amanita pantherina are the most common mushrooms containing isoxazole (6). Especially, Amanita muscaria has a bright red color, which makes it attractive and dangerous for children. Glutaminergic neurotoxicity syndrome occurs when these mushrooms are consumed. The ibotenic acid structure is similar to glutamic acid and stimulates the glutaminergic receptors of the central nervous system. Musimol is similar in structure to gamma amino-butyric acid (GABA) and stimulates GABA receptors. About 2 hours after consuming the mushrooms, symptoms such as confusion, speech disorder, mydriasis and delirium occur. Excitatory symptoms such as hyperreflexia, hyperactivity and seizures can be treated with benzodiazepines (3). In our 3 patients, glutaminergic neurotoxicity findings such as confusion, speech disorder, mydriasis was observed.

The exact diagnosis in MP is made by isolating the toxin. Amanitin can be isolated from urine by enzyme-linked immunoassay in the first 36-48 hours after consumption of mushroom (9). Since there are no devices in our hospital to isolate toxins and ensure the diagnosis, the diagnosis of pantherina syndrome in our cases was based on evaluation of the the patient's history and clinical symptoms.

Treatment is usually of a supportive and is directed by the patient's symptoms. Stomach lavage and activated charcoal administration is recommended for the removal of toxins. Symptoms in Pantherina syndrome are usually mild and do not require additional treatment. Benzodiazepines may be useful in cases of seizures or hyperactivity. Severe intoxication may result in coma and may require intubation. In such cases, intensive care treatment is required (10). Our patients were followed up with supportive treatment in emergency intensive care unit, case 1 and case 3 recovered within the first 24 hours. In Case 2, the symptoms prolonged up to 72 hours. Three patients were discharged by full recovery.

In patients presenting with unexplained confusion and neurological symptoms, MP should be one of the diagnosis to consider. Patients' anamnesis should be taken carefully. Mushroom consumption story should be carefully investigated. Patients who develop neurological symptoms after MP should be followed up in intensive care.

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