

# Aynı Mantar Zehirlenmesinde İki Farklı Klinik (İki Olgu Sunumu) *Two Different Intoxications With The Same Mushroom (Report Two Cases)*

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## ABSTRACT

After dinner the same mushroom two patients that are the mother 58 years old and her son 27 years old were admitted to our emergency department. First stage renal disease in patients with heart failure occurred in the second case. First cases to be taken into dialysis fistulas were opened and were discharged continuously. General conditions improved with medical treatment was the second case. Although the same mushroom dishes are always different clinical picture should be taken into consideration.

**Keywords:** Heart Failure, Mushroom poisoning, Renal Failure

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## ÖZET

Aynı mantar yemeği sonrası acil servisimize 58 yaşında anne ve 27 yaşındaki oğlu olmak üzere iki olgu başvurdu. Birinci olguda böbrek yetmezliği, ikinci olguda kalp yetmezliği oluştu. Birinci olgu fistül açılarak sürekli diyalize alınmak üzere taburcu edildi. İkinci olgu medikal tedavi ile kalp yetmezliği düzeltilerek taburcu edildi. Aynı mantar yemeği olmasına rağmen farklı klinik tablolar her zaman göz önünde bulundurulmalıdır.

**Anahtar Sözcükler:** Mantar zehirlenmesi, Kalp yetmezliği, Böbrek yetmezliği

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## INTRODUCTION

Mushroom intoxication is a mortal intoxication if it is not interferred early. There are more than 2000 species of mushroom in the world. 50 of these mushrooms are toxic and most of them could be found in our country <sup>(1)</sup>. We reported a 58 years old mother and 27 years old son that applied to emergency service with different intoxication clinics after eating the same mushroom.

### CASE 1

A 27 years old man applied to our emergency service with dispnea and palpitation 12 hours after eating mushrooms. 90/60 mm Hg tension arterial, 115/min heart rate and 37.7 °C fever were found in physical examination. Heart sounds were normal and epigastric pain was detected in examination. There was not any property in medical history and physical examination of other systems.

The blood levels of CPK, CK-MB, Troponine and LDH were over cut of values (Tablo 1). There were lack of R progression and incomplete right bundle block (RBBB) in ECG. Ejection fraction (EF) was 30% and right and left ventricular wall motion was detected diffuse hypokinetic in echocardiographic (ECO) evaluation. Pulmonary artery pressure (PAP) was calculated 45±8 mmHg. There was no valvular pathology.

According to evaluation of patient, we thought that diffuse hypokinesia in ECHO is a sign of mushroom intoxication due to have no cardiac pathology priorly. Patient was underwent medical treatment with hospitalization. Patient was discharged with medical treatment according to improvement of general condition and detection of EF as 45% in repeat ECHO. EF was over 50% in control ECHO after one month.

### CASE 2

58 years old female patient was hospitalized with diagnose of mushroom intoxication according to growing nausea, vomiting, weakness, reduction in urine and mental confusion 12 hours after eating the same mushrooms. 160/90 mm Hg tension arterial, 112/min heart rate and 36.8 °C fever were found in physical examination. Scleras was pale and subicteric. 2/6 systolic murmur was also detected in physical examination. Respiratory sounds were decreased in the lower zones and epigastric tenderness was detected. There was bilateral pretibial edema in extremity examination. There was hypertension treated with calcium channel blocker for five years. Urea and creatinine levels were increased in laboratory tests (Table 2). Levels of pH, pCO<sub>2</sub>, pO<sub>2</sub> and HCO<sub>3</sub> were 7.38, 32 mmHg, 88 mmHg, 24 mmol/L respectively in blood gas examination. ECHO examination showed 60% EF with normal left ventricule functions and 20±5 mmHg PAB with normal right cardiac cavities. Sinus tachycardia and right bundle branch block were revealed in ECG. Bilateral renal size and cortical thickness were detected in normal values in renal ultrasonography. Urine output was normal during hospitalization. Patient was underwent dialysis with diagnosis as acut renal failure due to mushroom intoxication. Patient was discharged with chronic dialysis programme according to renal failure.

## DISCUSSION

Rainy weather and moistly environment are favorable conditions for growth of toxic or non-toxic mushrooms <sup>(2,3)</sup>. The rate of mushroom intoxication in Turkey is not known. However, rainy spring seasons is favorable for growth of toxic mushrooms. All of the patients in our reagon are applied to hospital in spring months especially in May and June. Two-thirds of them are applied in June. Mortal mushroom intoxications are seen with Amanita (Amanita phalloides, Amanita verna, Amanita ocreata) and Gallerina species <sup>(4)</sup>. Mushrooms in Amanita group is commonly seen in Turkey and they are responsible in 90% of mushrooms intoxication resulting with death in Turkey <sup>(5)</sup>. Amatoxins (alpha-amanitin and beta amanitin) that are produced by Amanita phalloides, caused 90% of deaths with severe liver, kidney and central nervous system damages <sup>(6-7)</sup>. Amatoxins are resistant to cooking and freezing <sup>(4)</sup>. Amanita phalloides contains 2-3 mg amatoxin in one gram dry weight and it can caused to death when the patient eat 50 grams of this mushroom. Amatoxin level of Gallerina species is half of Amanita phalloides <sup>(5)</sup>. We could not detect the species of mushrooms due to eating a mixed mushroom meal

BIOCHEMISTRY	1.GÜN	2.GÜN	3.GÜN	4.GÜN	5.GÜN	6.GÜN
CPK (ng/mL)	413	1227	953	398	199	114
CK-MB (ng/mL)	9,3	121,9	58,9	18,4	6,1	2,4
Troponin (ng/mL)	1,06	38,5	21,55	10,01	6,02	0,4
LDH (IU/mL)	225	246	410	290	280	220
Urea (mg/dL)	31	32	28	23	18	30
Creatinine (mg/dL)	0,89	0,87	1,2	0,79	0,88	1,01
Na (mmol/L)	138	136	139	137	136	138
K (mmol/L)	4,7	4,5	3,8	3,9	4,4	3,8
SGOT (IU/mL)	34	86	122	59	32	23
SGPT (IU/mL)	15	18	25	21	18	15

Table 1. Biochemical changes by day

BIOCHEMISTRY	1. GÜN	2. GÜN	3. GÜN
Urea (mg/dL)	95	62	88
Creatinine (mg/dL)	6,88	4,9	7,2
Na (mmol/L)	134	132	128
K (mmol/L)	4,8	4,5	5,8
SGOT (IU/mL)	72	53	47
SGPT (IU/mL)	172	161	122
Total Bilirubin (mg/dL)	1,4	1,8	1,2
Direct Bilirubin (mg/dL)	1,24	1,66	1,01
CK-MB (ng/mL)	2,0	2,3	2,1
Troponin (ng/mL)	0,04	0,14	0,08

Table 2. Biochemical changes by day

The onset of uremic symptoms associated with reduction of urinary frequency and urinary volume. The most common pathology in acute renal failure after mushroom intake is acute tubular necrosis. The renal failure in patients is caused by hepatorenal syndrome and directly renal toxic effect of alpha-amanitin <sup>(8)</sup>. However one-third of patients are treated without dialysis and other one-third of patients are treated with a few dialysis, the remaining patients need chronic dialysis programme <sup>(9)</sup>. Our second case was discharged with chronic dialysis treatment. However, renal and liver failures could be seen most of mushroom intoxication, cardiac failure is very rare. Blood levels of CK-MB, Myoglobin and Troponine-I and ECHO are used in

follow-up of cardiac failure. Quenot et al. reported cardiac damage in mushroom intoxication without cardiac dysfunction and acute coronary syndrome<sup>(10)</sup>. There was cardiac failure without acute coronary syndrome due to myocardial damage in our case. In conclusion, cardiac evaluation should be done in patients with mushroom intoxication addition to renal and liver evaluations if additional symptoms were detected in physical examinations. Elevated cardiac enzymes without acute coronary syndrome in patients with intoxication may be caused by amatoxine. On the other hand, education of people about mushroom intoxication and early application to health services are very important.

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