

## ASPECTS OF MUSHROOM INTOXICATION IN CHILDREN

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### Abstract

*Background* – Mushroom intoxication remains a current issue in the paediatric pathology, both as morbidity and as clinical expression. *The aim* of this work is to define the clinical aspects at the onset of the intoxication in children in our geographical area. *Materials and method* – the retrospective longitudinal study of the medical files of children admitted between 1<sup>st</sup>-Jan-2008 and 31<sup>st</sup>-Dec-2011 to the Paediatric Clinic of Arad with a diagnosis of acute mushroom intoxication. *Results and discussions* – Out of the 11 children who were monitored, 8 showed a short incubation period and 3 showed a long incubation period. The intoxication appeared in other family members in only 5 cases, the other 6 were isolated cases. Clinically, the children presented: altered clinical condition, vomiting, diarrhoea, nausea, abdominal pain, dizziness, headache, somnolence, delirium. *Conclusions* – The most prevalent cases were with short incubation periods, in children from a rural area. The onset symptoms were dominated by digestive issues and not so much by neurological ones. The rapid onset of vomiting with the modification of the general state in children from a rural area must point the anamnesis towards mushroom intoxication, even in the absence of symptoms in other family members – in this study, there were 6 cases without a family history.

**Key words:** Mushroom intoxication, symptoms, child

### Introduction

Although not very common, mushroom poisoning is characterized by the severity of symptoms that often requires hospitalization, but also by unpredictable evolution, especially when it comes to poisoning by mushrooms with long incubation period.(1)

In Romania there are approximately 50 species of poisonous mushrooms and are known the world over 4000 species of mushrooms.(2)

Depending on the debut of symptoms related to poisoning, when talking about mushroom poisoning, these are classified into two categories:

- short incubation intoxication
- intoxication long period of incubation.

In the first case, the symptoms of poisoning occur 15 minutes to 3 hours after ingestion, and in the second case, the symptoms appear after 12 hours of ingestion.

Symptoms vary, depending on the type of mushroom ingested, the chemical structure of their toxins, mechanism of action, severity of visceral lesions produced.(3,4,5)

Thus, mushroom intoxication with short incubation period can develop: cholinergic syndrome, atropine, resinoidian, hallucinatory, coprinian and for mushroom poisoning with long incubation it might develop giromitrian syndrome, orellanian, faloidian. The worst case scenario, with the reserved prognosis and mortality up to 80-90% are given by Amanita phalloides poisoning, classified among the mushrooms with long incubation period.(6,7,8)

### Materials and method

The study was conducted by retrospective longitudinal analysis of observation sheets of the children admitted between 01.01.2008-31.12.2010 in Arad Pediatrics Clinic with a diagnosis of acute mushroom poisoning.

Tracked parameters were: incubation period, the presence of symptoms in other family members, symptoms at onset, progress with treatment, days of hospitalization, complications occurred, first aid measures, awareness of the disease by the entourage.

The study group consisted in 11 children: 1 child (9.09%) less than three years, six preschool children (54.54%), 3 children with age between 7 and 14 (27.27%) and one over 14 years (9.09%); 8 (72.72%) children were from rural areas and the remaining 3 children were living in urban areas.

Data were processed with SPSS 10.

### Results and discussions

Of the 11 children monitored, 8 (72.72%) had symptoms that appeared after a short period of time (under 6 hours), which was a landmark for intoxication with short incubation and 3 (27, 27%) of them showed symptoms after a longer incubation (more than 6 hours). This parameter is essential to be included in history because it is the most important benchmark in terms of medical attitudes.

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Only in 5 cases (45.45%), poisoning occurred in other family members, the remaining 6 (54.54%) being isolated. We believe that this difference is rather related to the preparation of mushrooms than individual reactivity to toxins; in all 5 cases of poisoning in the family, the cooking was made by boiling or roasting small pieces of mushrooms, mixed in homogeneous composition, as opposed to isolated cases where history has shown the consumption in large quantity or by consumption of large mushrooms, roasted entirely of breaded fried.

Clinically, the children presented: general state changed: 11 cases (100%), vomiting: 11 cases (100%), diarrhea: 5 cases (45.45%), nausea: 8 cases (72.72%), abdominal pain: 8 cases (72.72%), vertigo: 3 cases (27.27%), headache: two cases (18.18%), somnolence: 3 cases (27.27%), delirium: 2 cases (18.18%).

From these data we see an associative relationship between changing the general condition and vomiting which was present in all 11 cases (100%), between nausea and abdominal pain the 72.72% of cases, whereas neurological symptoms can be linked to the interest of the nervous system (vertigo and delirium) found in a lower percentage, 27.27% and 18.18%. Headache and somnolence were related to dehydrated patients with some neurological signs.

Regarding the development therapy, all cases have progressed to healing without lesions. The most frequent complication was acute dehydration syndrome in 5 cases (45.45%) and urinary retention with bladder globe, in one case (9.09%).

Days of hospitalization ranged from 7 to 10 days in 90.90%, one patient was discharged the 6th day (9.09%).

All 11 cases admitted had received first aid measures granted by medical personnel as part of pre-hospital care, even in the 6 isolated cases of intoxication.

A particularly important aspect is related to these 6 cases of isolated intoxication, cases in which parents have not noticed the relationship effect between the consumption of mushrooms and the illness of children, so they weren't aware of the phenomenon; in 4 cases only the detailed history emergency room revealed this fact; questioned about the use of mushrooms, parents have denied that this would be the cause the child illness, bringing as an argument that the whole family has consumed the mushrooms.

### Conclusions

The most prevalent cases were with short incubation periods, in children from a rural area. The onset symptoms were dominated by digestive issues and not so much by neurological ones. The rapid onset of vomiting with the modification of the general state in children from a rural area must point the anamnesis towards mushroom intoxication, even in the absence of symptoms in other family members – in this study, there were 6 cases without a family history.

By all means of information and health education in must be made public the danger posed by consumption of mushrooms gathered from the forest, even by traditional connoisseurs and collectors.

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