057

Thistle While You Work: A Case of Mushroom Poisoning with Liver Recovery Evident Before Silibinin Administration

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BACKGROUND

Ingesting some species of *Amanita* mushrooms can lead to hepatic failure and death. Although many therapies have been speculated to be potentially beneficial, there is no uniformly accepted standard treatment. We present a case of suspected amatoxin-induced hepatic failure initially treated with hydration, N-acetylcysteine (NAC) and multi-dose activated charcoal (MDAC). The patient was later enrolled in a clinical trial involving silibinin. The time course of hepatic recovery in relation to silibinin administration is compared, and relevant research implications are considered.

CASE REPORT

A 49-year-old man, with history of untreated Hepatitis B, presented with vomiting and diarrhea 12 hours after ingestion of foraged mushrooms. Physical exam and laboratory studies were unremarkable. He was hospitalized for hydration and serial hepatic monitoring. Within 24 hours the patient's serum hepatic transaminases rose to AST 289 U/L and ALT 286 U/L, and IV NAC and enteral MDAC were administered. The man became jaundiced and hepatic deterioration was evident with lab values at 72 hours post-ingestion: AST 6962 U/L, ALT 6777 U/L, INR 6.7. Contact was made to enroll the patient in a national open-label trial of silibinin which was procured after an additional 20 hours. Liver improvement was evident *before* initiation of silibinin: AST 1477 U/L, ALT 4017 U/L, INR 2.5. Silibinin was continued for a 5 day protocol; the man was discharged on hospital day 9 with normal serum biomarkers of liver function.

DISCUSSION

Silibinin is an extract from milk thistle thought to impair hepatocellular uptake of amatoxin. It is available in the U.S. for antidotal administration via clinical trial. Hepatic recovery was evident in our patient, in a sensible time course, before silibinin administration. The analysis and interpretation of this non-randomized open-label clinical trial must be performed carefully, as the association of recovery to use of silibinin is this patient is unlikely to be causal. Indeed, had silibinin been procured sooner and used earlier in the hospital course, this case may have falsely appeared to be a silibinin-associated "save."