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Acute renal failure after intake of mushrooms: the orellanus syndrome

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Dear Editor:
It was with great interest that we read the article by Gallego et al.[1] describing a patient who presented a profile of severe gastroenteritis 12 hours after having consumed wild mushrooms, which was followed by acute renal failure and severe hepatic cytolysis. The patient improved with treatment, but on the seventh day another episode of kidney failure occurred which did not require kidney replacement therapy. This progression, which is ambiguously named "mixed syndrome" together with the opinion of an expert mycologist, who is neither named as a co-author nor listed in the acknowledgements, led the authors to suspect ingestion of both *Amanita phalloides* and *Cortinarius orellanus;*[1] the latter contains the orellanine toxin that gives its name to orellanus syndrome.

In our opinion, there was no orellanus syndrome. Rather, the condition was more likely **intoxication with hepatotoxic mushrooms** of the *Amanita* or *Lepiota* genus; these contain amatoxins, which in a third of all cases cause secondary renal failure between the fifth and tenth day following ingestion.[2] In a series of 77 appraisable cases, Piqueras[2] detected secondary nephropathy in 28, of which 27 also presented renal failure at the onset, as with the case in question.[1] This could fundamentally be due to initial hypovolaemia with renal hypoperfusion, and in some cases to persistent diarrhoea after the improvement of the hepatic analysis which permitted discharging the patient from the ICU and discontinuing intensive fluid therapy. All of the above stresses the importance of replacing the liquids that are lost during the gastrointestinal phase, during both the first days and in later days.[3]

We feel that the possibility of *Cortinarius orellanus* being involved in this case is remote, since intoxication from mushrooms containing orellanine has been observed in Northern and Eastern Europe, and is hardly known in the Mediterranean region.[4]

The review by Saviuc et al.[4] of 245 cases of orellanus syndrome showed a mean delay of 8.5 days before acute renal failure, with 50% developing chronic kidney disease. The worst prognosis was presented by those with a prior kidney disease and early appearance of renal failure. However, the case described by Gallego et al.[1] progressed favourably with no need for kidney replacement therapy, despite being a relatively early presentation of acute renal failure for orellanus syndrome.

This leads us to question the botanical identification of these mushrooms, a week after they were eaten. We suspect that it was done according to a description and/or photographs of the mushrooms provided by the patient or the gatherer. This method has been shown to be unreliable for identifying fungal species[5] if we compare it with studying the fresh material and then analysing it with an optical microscope.

We conclude with the reminder that continuous nasogastric suction alternated with activated carbon, together with sustained intensive diuresis, are the fundamental pillars for initial treatment of intoxication from hepatotoxic mushrooms.

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