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## In Response to “Acute Renal Failure after *Amanita ovoidea* Eating”

Dear Editor,

In issue 29(1) of Indian J. Nephrol., a report entitled “Acute Renal Failure after *Amanita ovoidea* Eating” was published by Li Cavoli *et al.*, in which a case of severe acute renal failure in an individual was attributed to consumption of the basidiomycete *Amanita ovoidea*.<sup>[1]</sup> The latter is morphologically similar to *A. proxima*, a nephrotoxic species containing the amino acid allenic norleucine, implicated in several poisonings.<sup>[2-5]</sup> Li Cavoli *et al.* (2019)<sup>[1]</sup> based their conclusions on the opinion of a single mycologist (the identity of whom is not disclosed, nor is the exact method of determination), who reportedly examined “remaining parts” of the collected basidiomes and identified the species as “*A. ovoidea*.” The authors also provide two *ex situ* photographs of at least five collected basidiomes, none of them in pristine condition. We remain skeptical as to whether all depicted basidiomes represent *A. ovoidea*.

The distinction of *A. ovoidea* from *A. proxima* is not always straightforward and, although some of the depicted basidiomes appear to be *A. ovoidea*, at least one of them displays a long slender stipe and an ochraceous-orange volva—features more consistent with *A. proxima*. Microscopic features do not separate the two species of concern. Furthermore, *A. ovoidea* and *A. proxima* grow in the same habitats, often fruiting side by side.<sup>[6,7]</sup> Therefore, a mixed collection containing basidiomes of both species cannot be excluded, which could potentially explain why the remaining four consumers remained asymptomatic. Given the above, the available samples should, in our opinion, have been subjected to DNA sequencing of the ribosomal internal transcribed spacer (ITS) region, a relatively inexpensive and reliable method of analysis, to confirm identification and exclude the possibility of a mixed collection. We call attention to the findings of Biagi *et al.* (2014),<sup>[8]</sup> who detected only minimal presence of amino acids (including allenic norleucine) in *A. ovoidea*, although they hypothesized that the fungus may potentially become toxic under certain conditions. Nevertheless, *A. ovoidea* is frequently consumed in parts of the Mediterranean region, and such potent nephrotoxicity has never previously been reported.<sup>[6,7,9]</sup> We feel that the evidence presented in support of toxicity of *A. ovoidea* is insufficient and the question warrants a more thorough investigation. Due to the possibility of mixed collections and obvious difficulties in reliably identifying poorly preserved specimens or fragments of basidiomes by standard morphological techniques, we urge clinicians to pursue DNA sequencing of all available samples as soon as

possible after emergency intervention, before designating the culprit in a poisoning incident.

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### Conflicts of interest

There are no conflicts of interest.

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