Table 10.4.3.1 Continued

Group	Toxin	Commonly implicated species	Clinical effect	Time of onset
6–Miscellaneous reactions				
6A–Shiitake dermatitis	Lentinans	*Lentinola edodes*	Linear prurigo	1–2 days
6B–Erythromelalgic	Acromelic acid	*Clitocybe acromelalgia/ amoenolens*	Acromelalgia	Hours–days
6C–Paxillus syndrome	?	*Paxillus involutus*	Collapse, gastroenteritis, autoimmune haemolysis, AKI, DIC	1–2 h
6D–Encephalopathic syndrome	Cyanide	*Pleurocybella porrigens*	Cramps, coma (in elderly patients with chronic renal/hepatic disease)	Days–weeks

Based on the new classification by White J, Weinstein SA, De Haro L, Bédry R, Schaper A, Rumack BH, Zilker T. (2016).

Fig. 10.4.3.2 Death cap Amanita phalloides.
Courtesy of Hans Marklund.

reduction of the hepatic uptake of amatoxin. In some cases, liver transplantation may be the ultimate way of saving the patient.

1B–Early primary nephrotoxicity (aminohexadienoic acid poisoning)

Allenic norleucine (aminohexadienoic acid) and chlorocrotylglycine in *Amanita smithiana, A. pseudoporphyria, A. proxima*, and some other *Amanita* species can cause acute kidney injury (AKI). Initial gastrointestinal and other symptoms develop between 20 minutes and 12 h after ingestion, followed by AKI a few days later. This was reported from North America after ingestion of *A. smithiana*, mistaken for *Tricholoma magnivelare*, and in southern France, in patients who had eaten *A. proxima*, mistaken for *A. ovoidea* as part of 'proximien syndrome'. 'Proximien syndrome' consists of gastrointestinal symptoms starting 8–14 h after ingestion, followed after 4 days by AKI with evidence of transient liver damage and severe cardiotoxicity in some cases.

1C–Late primary nephrotoxicity (orellanine poisoning)

Orellanine is a potent nephrotoxin present in certain species of the family Cortinariaceae, genus *Cortinarius. C. orellanus* and *C. rubellus* (*speciosissimus*) ('cortinar' or webcap") (**Figs. 10.4.3.4 and 10.4.3.5**) are responsible for most poisonings. Orellanine is a bipyridine N-oxide that may interfere with protein synthesis in the kidneys causing interstitial nephritis, tubular cell damage, basal cell membrane rupture and, eventually, irreversible fibrosis.

Clinical features

Orellanine poisoning is the most insidious of all mushroom poisonings. Occasionally, there may be some mild gastrointestinal symptoms within a couple of days after the meal, but as these symptoms

Fig. 10.4.3.3 Destroying angel Amanita virosa.
Courtesy of Hans Marklund.

Fig. 10.4.3.4 Cortinarius rubellus (speciosissimus).
Courtesy of Astrid Holmgren.