

POISONING OF A DOMESTIC DOG BY *INOCYBE PHAEOCOMIS* (PERS.) KUYPER

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Case history

A fourteen year old, neutered female Springer Spaniel (Brandy), was presented as an emergency at the Royal (Dick) School of Veterinary Studies in Edinburgh in a collapsed state. On examin-

ation 'Brandy' was noted to be depressed and salivating. Her body temperature was 36.1°C (normal range 38.1+/-0.3°C). She had diarrhoea and the excreta contained blood and had vomited twice resulting in 5-10% dehydration.

On further questioning the owners it became apparent that two hours previously 'Brandy' had been seen eating mushrooms which were growing in their garden. The onset of symptoms of poisoning followed soon afterwards. As the vomiting and diarrhoea continued the dog became weaker and collapsed in the garden. She remained in this state until presentation in the clinic.

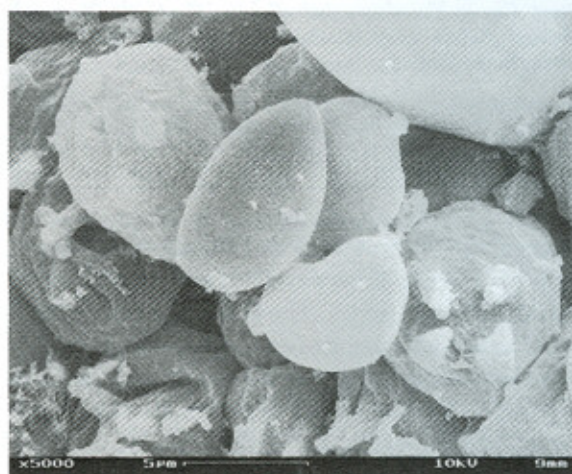


Fig 1 Basidiospores found on fragmented basidiome. Critical point dried. Bar = 5 µm.

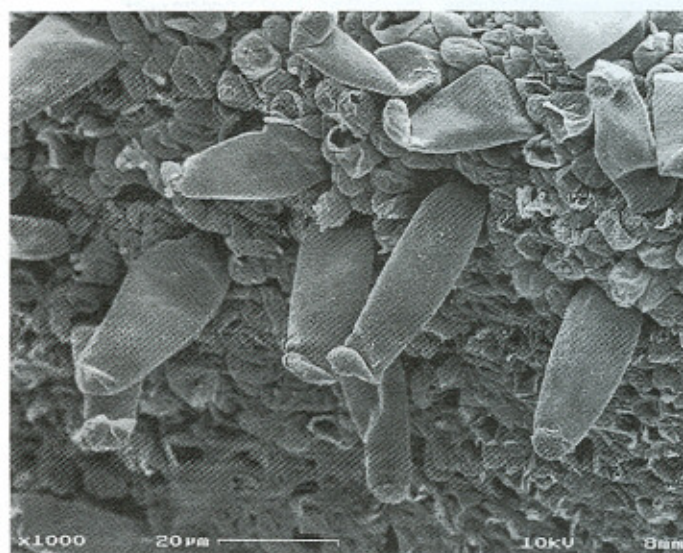


Fig 2 Cystidia on gill of fragmented basidiome. Critical point dried. Bar = 20 µm.

Mycological identification

The senior author made contact with the mycologists at the Royal Botanic Garden Edinburgh, to arrange the identification of the mushrooms which were thought to be responsible for the poisoning. Samples of both vomit and fresh specimens collected in the owner's garden were examined. The genus *Inocybe* could be identified immediately and a prognosis for the recovery of the animal could be given on account of known histories of human poisonings involving fungi of this genus.

Nine basidiomes or parts of basidiomes belonging to a species of *Inocybe* were dissected from a sample of vomit; in addition a single basidiome of an entolomataceous agaric was located. The *Inocybe* by virtue of its smooth basidiospores (Fig. 1) belonged to the Leiosporae (or sg. *Inocybe*); the dark gill-edge, the cylindrical, thick-walled cystidia (Fig. 2) which yellow in ammoniacal solutions and subamygdaliform basidiospores present in the material all pointed to *I. phaeocomis*. The size of the basidiospores was (7.4)8.7-10.5 x 5.2-5.7 µm which agrees admirably with those given for this species in Kuyper's monograph (8.0-10.5(-11) x 5-6 µm). *Inocybe phaeocomis* is more generally found in wet deciduous forests.

In the sample of small agarics taken from the place in the garden where the dog was feeding, four different taxa were located. *Coprinus mica-ceus* (Bull.: Fr.) Fr., *Hygrocybe ceracea* (Wulf.: Fr.) Kummer, *Laccaria laccata* (Scop.: Fr.) Cooke, and *Inocybe phaeocomis*. With the large number of basidiomes of the last species in the sample of vomit it would appear there had been some selection. The material from the garden could be assigned to var. *major* (S. Petersen) Kuyper, probably more familiar under the name *I. obscura* (Pers.: Pers.) Gillet. The entolomataceous fungus had all the characters of *Nolanea sericea* (Bull.: Fr.) Orton, a common lawn agaric.

Treatment

Intravenous fluids were administered and 'Brandy' was admitted to the observation unit. The following day her body temperature had returned to normal, she was much brighter and responsive. The vomiting and diarrhoea had ceased, her heart rate had returned to normal and she was no longer recumbent. She was discharged two days after the initial incident.

Discussion

The cause of the clinical signs observed in this case are thought to be connected with the ingestion of the mushrooms. Out of the five different species involved only two are known to cause poisoning in man. Many species of *Inocybe* are known to cause muscarine poisoning and *Nolanea* species may cause gastro-enteritis. The symptoms described for 'Brandy' are typical for human poisoning with species of *Inocybe*; they should

cease after 24 hours and did so likewise in the dog. When eaten, clinical symptoms of poisoning are usually evident within 15–30 minutes of ingestion (Bresinsky & Besl, 1990). Since the initial isolation of muscarine from *I. patouillardii* (Eugster, 1957), this toxic substance has been detected by chromatography and by other methods in a number of *Inocybe* spp. (Eugster & Müller, 1959; Malone *et al.*, 1961; Brown *et al.*, 1962; Robbers *et al.*, 1964; Bresinsky & Besl, 1990).

Conclusion

To our knowledge this is the first report of the poisoning of a dog who had ingested *Inocybe phaeocomis*, and where the animal had suffered acute symptoms of mushroom poisoning similar to those which would be expected for humans.

References

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