Rev Iberoam Micol. 2020;37(3):79–80

Revista Iberoamericana de Micología

www.elsevier.es/reviberoammicol

Mycologic Forum

Aspergillosis in cats and dogs: Not everything green is *Aspergillus fumigatus*☆

Aspergilosis en perros y gatos: no todo lo verde es *Aspergillus fumigatus*

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ARTICLE INFO

Article history:
Received 27 January 2020
Accepted 7 February 2020
Available online 4 May 2020

Aspergillus fumigatus is the most common cause of aspergillosis in domestic animals. However, *Aspergillus flavus*, *Aspergillus niger* or *Aspergillus terreus*, among other species, can be isolated less frequently from a variety of clinical forms. In dogs and cats this mycosis is rare. As opportunistic pathogens, the immune status of these animals determines the evolution of these infections. The most common clinical forms are sinonasal infections. Unlike in humans, bronchopulmonary and disseminated forms are uncommon.

The immunosuppression caused by some diseases, viral infections or cytotoxic and glucocorticoid therapy facilitates the dissemination of this infection. In dogs, disseminated aspergillosis shows some breed predisposition, since most cases have been reported in German shepherds. However, the few cases of this clinical form described are usually caused by *A. terreus*. Disseminated aspergillosis has a very poor prognosis and is rarely treated with antifungal agents.

Isolated lesions often occur in the nasal cavity, causing the so-called sinonasal aspergillosis. In dogs, nasal turbinates may be affected, causing osteolysis, and the infection can progress to the adjacent bones (Fig. 1). Treatment is complicated and may include the administration of topical antifungal agents (e.g. clotrimazole) by intranasal infusion using various procedures (e.g. nasal tubes, surgically implanted sinus tubes) and sometimes accompanied by systemic therapy.

Fig. 1. *Aspergillus fumigatus* plaque on the nasal mucosa of a dog causing severe turbinate destruction. Photo courtesy of Laura Fresno (Endolap Veterinaria).

In cats the infection may progress to the orbit, causing the sino-orbital form of this disease which has a bad prognosis, and is often fatal. This clinical form is rarely diagnosed in our latitudes. However, in Australia, some cases have been described, mainly

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https://doi.org/10.1016/j.riam.2020.02.001

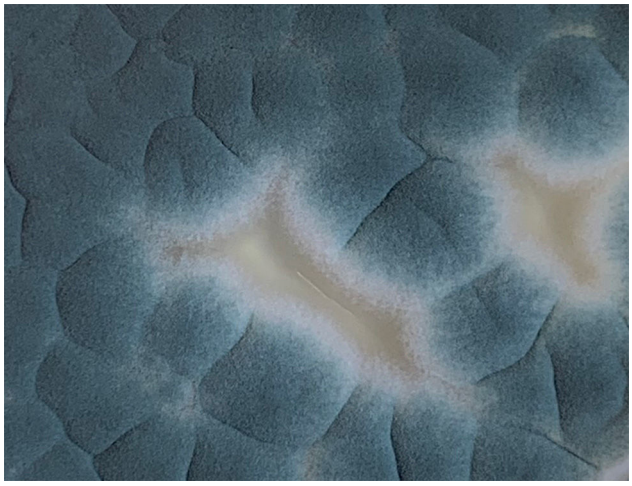

Fig. 2. Blue-green colonies of *Aspergillus fumigatus* on Sabouraud glucose agar.

produced by *Aspergillus felis*[1] and other species of the *Aspergillus virinidutans* complex, such as *Aspergillus udagawae* and *Aspergillus wyomingensis*, which are similar to *A. fumigatus*.[2] All of them are included in the section Fumigati, which includes more than 60 species. Many of these are called cryptic species because they are not distinguishable morphologically and are revealed by molecular phylogenetic analysis. Unlike *A. fumigatus*, species of the *A. virinidutans* complex usually have poor sporulation and do not grow at 50 °C. In addition, they show high minimum inhibitory concentrations to antifungals and the infections they cause are chronic and refractory to triazole therapy. Blue-green colonies (Fig. 2), columnar conidial heads, not everything green is *A. fumigatus*.

Conflict of interest

Author has no conflict of interest.

Acknowledgements

Financial support came from Servei Veterinari de Bacteriologia i Micologia of the Universitat Autònoma de Barcelona.

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