



LETTER TO THE EDITOR

Dear Sir

I am writing in response to the paper by Alex German and colleagues in the April edition of the *Journal of Feline Medicine and Surgery* (German et al 2005).

The paper reports several cases of oesophageal stricture in cats associated with use of the hyclate (hydrochloride) salt of doxycycline. I would like to take this opportunity to emphasise that these cases were likely attributable specifically to this formulation of doxycycline.

Whilst appreciating the varied availability of alternative doxycycline formulations in different countries, the authors should have further differentiated the different doxycycline salts registered for use in cats in the UK, Europe and elsewhere. This would have improved the applicability of the findings to the rest of the world, in keeping with the international focus of the *Journal of Feline Medicine and Surgery*.

It is widely accepted that the hyclate salt of doxycycline in tablet form may cause oesophageal ulceration in humans, and accordingly people are advised to drink one or two glasses of water immediately after taking tablets orally. Oesophageal ulceration has also been reproduced experimentally in cats (Melendez et al 2000, McGrotty and Knottenbelt 2002). Anecdotal observations by Australian veterinarians suggest that the hydrochloride salt of doxycycline is likewise highly irritant, causing both nausea and vomiting in a proportion of cats given this formulation (R Malik, personal communication). It has been established, however, that the monohydrate salt of doxycycline is less irritating and therefore, safer to administer orally than the hyclate or hydrochloride salts (Carlborg and Farmer 1983). The monohydrate salt has subsequently been marketed in a number of countries (including Australia, New Zealand, Italy and Korea) as VibraVet™ (Pfizer Animal Health) and is presented as tablets and a palatable paste formulation for use against susceptible microorganisms in dogs and cats. The paste formulation if further likely to reduce the possibility of

oesophageal ulceration due to less likelihood of retention in the oesophagus. Extensive post-registration experience with the product has confirmed its low ulcerogenic potential, with just one case of possible oesophageal ulceration (tablet formulation) reported since the Australian launch in 1993 (Data on File – Pfizer Animal Health). Over two million courses of treatment have been administered in this time (Data on File – Pfizer Animal Health). VibraVet™ has subsequently become a leading antibiotic with practitioners and feline medicine specialists due to its excellent tolerance profile and convenient formulation (Malik et al 2004).

Whilst an appreciation of the risk associated with the administration of this drug is vital, it is just as important that clinicians are made aware that the risk does not apply equally to all formulations. The precautions duly advised by the authors must be applied to hyclate and hydrochloride formulations, but our experience shows that the monohydrate salt does not require the same considerations. It would be prudent, however, either to administer doxycycline monohydrate tablets immediately before a meal or food treat, or to administer a few drops of water after administering the medication. VibraVet Tablets and Paste™ continue to be a valued part of the feline practitioner's armamentarium and concerns relating to doxycycline hyclate should not preclude their ongoing use.

References

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