

Unusual keratitis in a cat caused by *Toxoplasma gondii*



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Purpose

To describe a keratitis caused by the presence of the parasite *T. gondii* in a cat.



Conclusion

Toxoplasma gondii tachyzoites were found in the cornea of a systemically ill cat affected with massive bilateral keratitis. To the authors knowledge, this is the first case report showing identification of *T. gondii* organisms by corneal cytology in a cat.



Figure 2 :
At presentation, conjunctivitis with superficial corneal ulceration.



Figure 3 :
At 30 day recheck, severe conjunctivitis with keratitis, massive cellular infiltration, and deep corneal vascularization OD, stromal keratitis with miliary punctate corneal ulceration OS.



Figure 4 :
At 45 day recheck, keratitis improving.

Parasite life cycle : During the parasite life cycle there are 3 infectious stages: tachyzoite, bradyzoite and sporozoites. Bradyzoites are contained in cysts from the tissues of intermediate hosts; it is the latent form. Tachyzoites enter the intestinal mucosa, enter the circulatory system and colonize organs including eyes, active form. Sporozoites present in oocysts detach from feces.

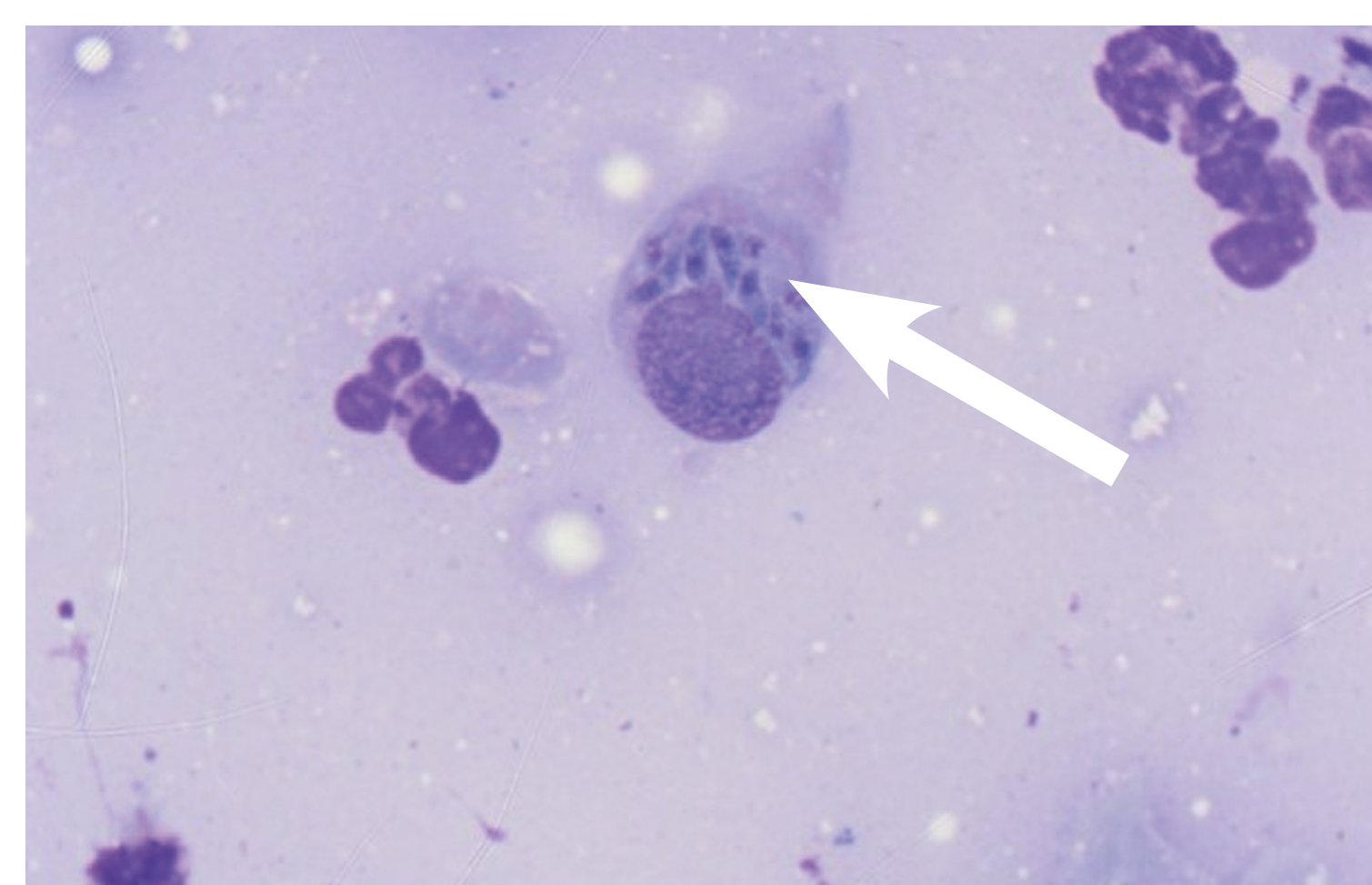
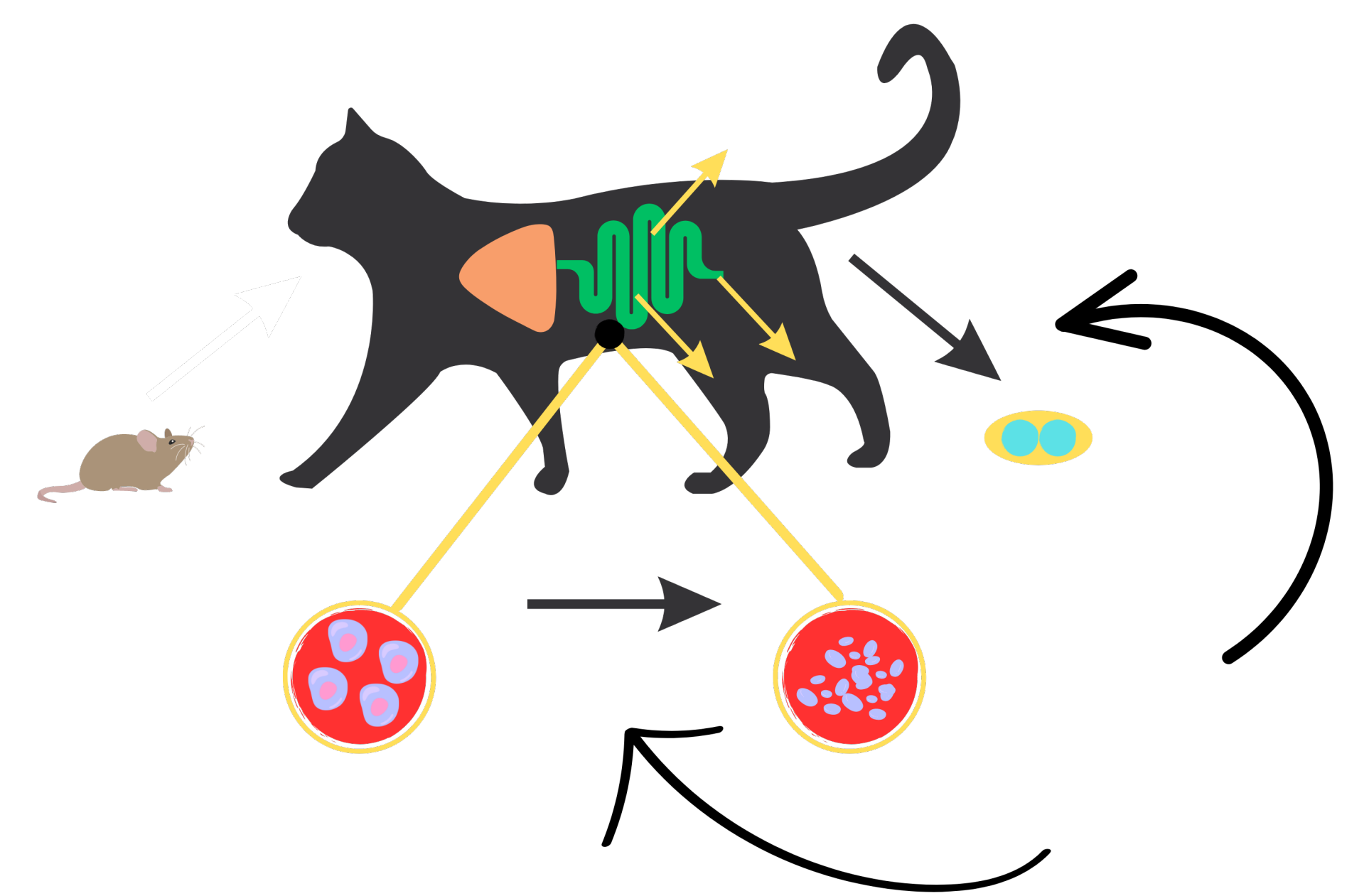


Figure 5 : One epithelial cell containing multiple banana-shaped tachyzoites, morphologically consistent with *Toxoplasma* spp. Few degenerated neutrophils are also seen. 1000x magnification (with oil immersion).

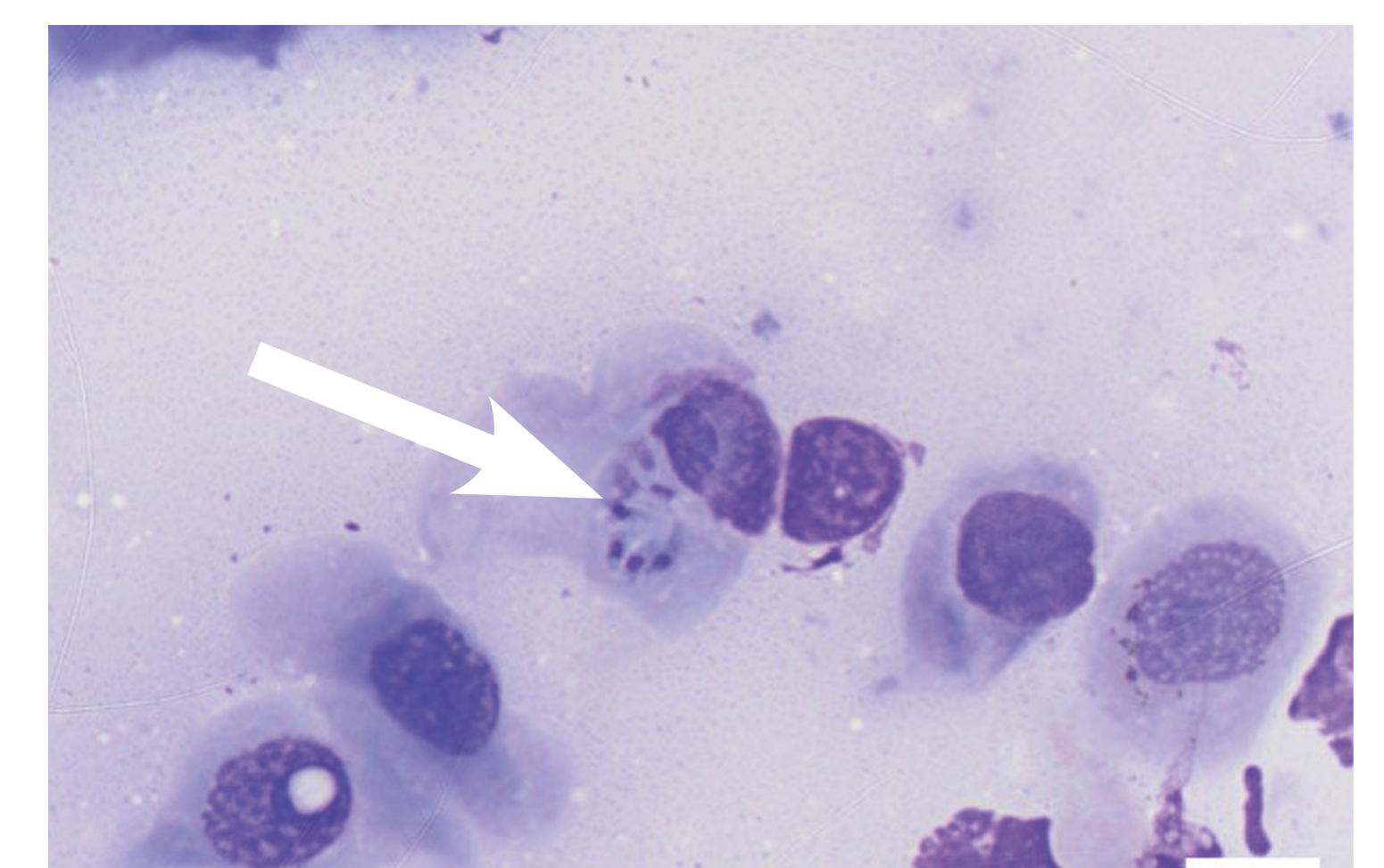


Figure 6 : One epithelial cell containing multiple banana-shaped tachyzoites, morphologically consistent with *Toxoplasma* spp. Few other epithelial cells are normal. 1000x magnification (with oil immersion).

Method

- A 15-year-old male neutered European shorthair cat (Figure 1).
- Presented with conjunctivitis OD and extended superficial corneal ulceration OS (Figure 2).
- Treatment with Oxytetracyclin ointment topically, and Famcyclovir systemically was initiated.
- Four weeks later, the situation had worsened, with bilateral severe keratitis, massive cellular infiltration, and deep corneal vascularization OD, stromal keratitis with miliary punctate corneal ulceration OS (Figure 3).
- A corneal cytology was performed.
- The treatment changed for Moxifloxacin and Oxytetracycline topically and Clindamycin and Famcyclovir systemically.
- Two weeks later, the keratitis had improved (Figure 4).
- Unfortunately, the cat died subsequent to cardiopulmonary arrest.

Results

- Corneal cytology : Inflammatory cells -Crescent shaped intracellular microorganisms matching with *T. gondii* tachyzoites. (Figure 5-6).
- *Toxoplasma* serology revealed a positive IgG status.
- Post mortem autopsy and histology showed several organic lesions.

References

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