**Purpose:** Conjunctival mastocytosis is a rare condition previously unreported in cats. We report on the morphology and clinical features of 10 submissions representing 8 cats. Also reported are preliminary results on the behavior and clinical outcome of this lesion.

**Methods:** 8 cases of feline conjunctival mastocytosis were selected from the COPLOW collection, which includes more than 6,000 feline specimens. The authors examined H&E, Giemsa and Toluidine Blue stained sections cut from paraffin blocks. Immunohistochemistry for CD117 (C-KIT) was also used. We described the status of the epithelium, presence in the epithelium and substantia propria of edema, mast cells and eosinophils. Follow-up information was received from ophthalmologists, referring veterinarians and owners by fax and/or phone.

**Results:** Edema was observed in all cases. Mast cells and eosinophils were seen in the epithelium and substantia propria. All 8 cases demonstrated mast cells in the epithelium, a unique and distinctive feature. Six of the 8 cases had mast cells in both the epithelium and substantia propria, while 2 cases demonstrated mast cells in the epithelium only. Seven of the 8 cases contained eosinophils in the epithelium substantia propria or both. Looking at the epithelial profile, six of the 8 cases displayed a papillated epithelial proliferation, with the remaining two cases showing ulceration. One of the cases contained “foamy” cells of unknown significance. Of the 8 cats, 3 showed recurrence after surgical resection and 3 did not, with 2 unknown. One of the cases reported multiple episodes of daily flare-ups which resolved without treatment. In one case, mastocytosis was found in the bulbar conjunctiva after initial diagnosis in the nictitans. CD117 was not useful in this study due to very inconsistent, weak staining of mast cells. Presumptive ocular feline herpesvirus infection was reported in 4 of the 8 cases based on clinician judgement. PCR documentation of FHV was not done.

**Conclusions:** Of the 6 cases with complete follow-up, 3 showed local recurrence. Eosinophils mingled with mast cells in 7 of the 8 cases. The finding of mast cells directly within the epithelium is a distinctive feature of this condition. We do not see mast cells within the epithelium or papillated epithelial proliferation in eosinophilic conjunctivitis as we see in mastocytosis. Corneal and conjunctival eosinophilic infiltration in cats is regarded as an indication of allergic inflammation (3). Allgoewer et al (4) demonstrated the presence of eosinophils, mast cells and other inflammatory cells in 12 cases of feline eosinophilic conjunctivitis. They examined the samples with electron microscopy and PCR but were unable to demonstrate the presence of FHV. Because eosinophilic/mastocytic skin lesions were not detected in any of the cats in this study, there appears to be no relationship between Feline Conjunctival Mastocytosis and eosinophilic granuloma complex. All we can say is that a viral or allergic etiology is hypothesized.

**Our results raise some questions for future work.** Does eosinophilic conjunctivitis progress to mastocytosis? Does Feline Herpes Virus play a role in the etiology of feline conjunctival mastocytosis? Do conjunctival mastocytosis lesions progress to mast cell tumors?

**References**