

Incidence of the corneal affections in cats

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The present study was carried on clinical cases presented to the Department of Veterinary Surgery and Radiology, Department of Veterinary Clinical Complex, College of Veterinary Science, Proddatur and Department of Veterinary Surgery and Radiology, NTR College of Veterinary Science, Gannavaram related to Corneal affections in felines over a period of 12 months. Incidence of corneal affections and the variable factors like age, gender and eyes affected were recorded. Out of a total of 545 feline surgical cases, 68 were having affections related to ocular system, out of which 26 were having corneal affections. Out of all the corneal affections, the majority were deep stromal ulcers followed by superficial corneal ulcers. Domestic short-hair breeds showed highest incidence followed by Persian, Domestic long-hair, Tuxedo and Calico breeds. The age group of 2-4 yr had the highest incidence followed by the above 4 yr and 0-2 yr. Higher incidence was recorded in males compared to females with more affections in right eye followed by left eye (OS).

Keywords: Eye, Feline, Incidence of corneal affections

The eye is considered as a window to the world and is the sole organ that functions as a biological camera. The cat eye has a relatively large cornea and lens, a rod dominated retina and tapetum cellulosum, which is well adapted to vision in dim light (Warren, 2004; Dutta, 2006). Among the ocular diseases, corneal affections are more potentially impair eyesight in companion animals. The normal physio-anatomical characteristics and functions are disrupted in corneal diseases leading to loss of corneal clarity is typically the first sign of corneal disease and resulting in vision loss in animals (Gelatt and Brooks, 2011; Anoop *et al.*, 2016). The main causes include trauma, abnormalities in the structure and function of eyelids, lashes and tear film, physiological imbalances, various infections by bacteria, virus and fungus. The ability to recognize, diagnose and treat corneal disease is essential for maintaining vision and comfort in feline patients (Vangsakul *et al.*, 2009). The objective of the present study was to record incidence of corneal affections based on the age, gender, breed and eyes affected.

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related to corneal affections in felines over a period of 12 months. Cats were subjected to clinical and detailed ophthalmic examinations to arrive at confirmatory diagnosis. Incidence of corneal affections i.e., superficial corneal ulcers, deep stromal ulcers, descemetocoele, sequestrum, melting ulcers, foreign body, perforating ulcer, opacity, acute hydrops and the variable factors like age, gender, etiology and eyes affected were recorded.

Out of a total of 545 feline surgical cases reported, 68 (12%) were having affections related to ocular system, out of which 26 (38%) were having corneal affections. However, higher incidence of 49% was recorded by Demir, 2024. Among the corneal affections, the majority were corneal ulcers 42.30% (n=11) i.e., deep stromal ulcers (n=7) and superficial corneal ulcers (n=4) followed by perforating ulcer 4.41% (n=3), opacities 4.41% (n=3), descemetocoele 2.94% (n=2), sequestrum 2.94% (n=2), keratomalacia 2.94% (n=2), foreign body 2.94% (n=2) and corneal acute hydrops 1.47% (n=1), which were diagnosed based on the general clinical, and detailed ophthalmological examinations. These findings were in accordance with Demir and Sensoy (2023) who also reported higher incidence of corneal ulcers (43.60%). The differences in the rates of incidence could be attributed to the difference in breed, location and season of the study.

Among all the breeds reported, the higher incidence was recorded in Domestic short-hair breeds 17.64% (n=12), followed by Persian 11.76 % (n=8), Domestic long-hair 4.41% (n=3), Tuxedo 2.94 % (n=2) and Calico breeds 1.47 % (n=1). These findings are in accordance with Pederson *et al.* (2016), Pumphrey *et al.* (2019) and Demir and Sensoy (2023), who also reported higher incidences in domestic short hair breeds, whereas Jegou and Tromeur (2014), Balland *et al.* (2015), Laguna *et al.* (2015) and Graham *et al.* (2017) recorded higher incidence in Brachycephalic breeds. The difference in breed wise distribution may be due to more population of domestic short hair cats in this region.

The age group of 2-4 yr had the highest incidence of 50% (n=13) followed by above 4 years (26.92%; n=7) and 0-2 years had the least incidence (23.07%; n=6). These findings were in accordance with Laguna *et al.* (2015) and Pederson *et al.* (2016); whereas Featherstone and Sansom (2004), Barachetti *et al.* (2010), Jegou and Tromeur (2014), Balland *et al.* (2015), Graham *et al.*

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(2017) and Demir and Sensoy (2023) recorded higher incidence in cats aged above 4 years.

The gender wise distribution of corneal affections showed higher incidence in males 57.69% (n=15) as compared to females 42.30% (n=11). Among males, higher occurrence was recorded in Domestic short-hair cats 23.07% (n=6) followed by Persian 19.23% (n=5), Domestic long-hair 7.69% (n=2), Tuxedo 3.84% (n=1) and Calico cats 3.84% (n=1). Among females, higher occurrence was recorded in Domestic short-hair cats 23.07% (n=6) followed by Persian 11.53% (n=3), Domestic long-hair 3.84% (n=1) and Tuxedo cats 3.84% (n=1). These findings were in accordance with Jegou and Tromeur (2014), Balland *et al.* (2015), Laguna *et al.* (2015) and Pumphrey *et al.* (2019). Demir and Sensoy (2023) recorded higher incidence in female cats, however Featherstone and Sansom (2004) and Graham *et al.* (2017) did not report any sex predilection in their studies.

Among the cases studied, right eye (OD) 57.69% (n=15) showed higher incidence followed by left eye (OS) 42.30% (n=11). These findings were in accordance with the Laguna *et al.* (2015) and Graham *et al.* (2017). Contrary to our findings Andrew *et al.* (2001) and Pederson *et al.* (2016) recorded higher incidence in left eye (OS).

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