Indian J. Vet. Surg. 46(2): 135-138 December 2025

ijvs

Incidence of ocular affections in cats: a study of 356 cases

Simran Josan[1†], G.S. Khandekar[2], S.D. Tripathi[3], S.V. Gaikwad[3], Manika Jadhav[1], Aditya Patil[1], and Omkar Mishra[1]

Maharashtra Animal and Fishery Science University, Nagpur- 440 001 (Maharashtra)

[1]PG Scholar, [2]Professor and Head, [3]Associate Professor, Department of Veterinary Surgery and Radiology, Mumbai Veterinary College, Mumbai- 400 012

DOI No.: 10.5958/0973-9726.2025.00035.8 *Received: April, 2025*

The incidence of feline ophthalmic affections in the Mumbai region was evaluated with respect to age, breed, sex, and anatomical localization between August 2024 and January 2025. A total of 356 cases were diagnosed with ocular disorders. The most frequently recorded conditions, in descending order, were keratitis, conjunctivitis, uveitis, traumatic proptosis, corneal ulceration, blepharitis, glaucoma, corneal sequestrum, entropion, hyphema, cataract, corneal degeneration, eyelid agenesis, corneal perforation, traumatic wound, endophthalmitis, retrobulbar tumour, cherry eye, descemetocele, lens luxation, retinal detachment, enophthalmos, eyelid hidrocystomas, microphthalmia, anophthalmia, anterior s ynechia, and iris prolapse. Breed-specific predispositions were evident, including a higher occurrence of entropion in Persian cats and a greater incidence of herpetic keratoconjunctivitis and eyelid agenesis in non-descript cats. Younger cats, particularly those aged 0–1 year, exhibited the highest incidence (37.92%), suggesting an age-related susceptibility. Non-descript cats constituted the largest proportion of affected animals (61.24%), while male cats were more frequently affected than females. Anatomically, the cornea was the most commonly involved structure, accounting for 35.11% of all recorded affections. These findings highlight key demographic and anatomical risk factors for feline ocular disorders in the region and underscore the need for enhanced awareness and early diagnosis in vulnerable groups.

Keywords: *Cat, Cornea, Incidence of eye affections, Ocular affections, Persian cat*

The feline eye is a remarkable organ, distinguished by its unique anatomical features and exceptional visual capabilities. Cats possess a large cornea, vertically slit pupils, a highly dynamic lens positioned slightly posteriorly, a reflective tapetum lucidum, and a retina rich in rod photoreceptors - all of which contribute to their enhanced night vision and ability to perceive light, colour, motion, and depth with remarkable precision (Maggs, 2017). These structural and functional adaptations not only shape the visual experience of cats but also influence the spectrum and prevalence of ocular diseases encountered in this species.

The incidence patterns of ophthalmic disorders have been well documented in humans (Naskar *et al*., 2018) and in several domestic animal species, including canines (Sale *et al*., 2013; Kumar *et al*., 2018), equines (Thangadurai *et al*., 2010; Anjana *et al*., 2022), camelids (Kumar *et al*., 2016; Ranjan *et al*., 2016), and mixed domestic animals (Pawde, 2006; Tamilmahan *et al*., 2013). However, comparable systematic studies focused on feline ophthalmic conditions remain scarce, and to date, no comprehensive investigation has been undertaken in India.

Therefore, the present study aims to address this gap by evaluating the incidence, diagnostic approaches, and disease characteristics of ophthalmic affections in cats. By providing region-specific epidemiological data, this work contributes to a clearer understanding of the patterns and determinants of ocular diseases in the feline population.

Materials and Methods

A survey on the incidence of ocular affections in cats was conducted between August 2024 and January 2025. The study included cases presented to the Department of Veterinary Surgery and Radiology, Outpatient Department of Mumbai Veterinary College, Parel, Mumbai; the affiliated Bai Sakarabai Dinshaw Petit Hospital for Animals, Parel, Mumbai; and selected private veterinary clinics within the Mumbai region. Data from private clinics were collected using a structured questionnaire documenting clinical details of feline ocular cases, including age, breed, sex, and anatomical location of the lesions.

All cats underwent a comprehensive ophthalmic examination to ensure accurate diagnosis. The diagnostic protocol included neuro-ophthalmic assessments - menace response, dazzle reflex, palpebral reflex, corneal reflex, and pupillary light reflex - followed by adnexal and anterior segment evaluation. Schirmer tear testing and fluorescein dye staining were performed as required. Fundus examination was conducted using direct or indirect ophthalmoscopy. Tonometry was carried out in cases with suspected glaucoma (elevated intraocular pressure) and to support the diagnosis of acute uveitis (reduced intraocular pressure). B-mode ocular ultrasonography was employed to assess intraocular

†Corresponding author; Email: simranjosan4@gmail.com

structures when visualization was hindered by corneal, lenticular, vitreous, or aqueous opacities, or by significant periocular swelling.

The occurrence of ocular affections was documented with respect to age, breed, sex, and anatomical localization. Data were analysed descriptively, and the percentage distribution of each parameter was calculated to determine incidence patterns.

Results and Discussion

Between August 2024 and January 2025, a total of 356 cats were diagnosed with ocular affections across veterinary facilities in the Mumbai region (Table I).

Table 1: Incidence of various ocular affections in cats in Mumbai region from August 2024 to January 2025 (n=356).

Sl. No.	Ocular location	Type of ocular affection	Number of cases	Incidence (%)
1	Cornea	Keratitis	64	17.98
		Corneal ulceration	30	8.43
		Corneal sequestrum	12	3.37
		Corneal degeneration	8	2.25
		Corneal perforation	7	1.97
		Descemetocele	4	1.12
		Total	**125**	**35.11**
2	Adnexa	Conjunctivitis	46	12.92
		Blepharitis	26	7.30
		Entropion	10	2.81
		Eyelid agenesis	7	1.97
		Traumatic wound/ laceration	6	1.69
		Cherry eye	4	1.12
		Eyelid hidrocystomas	2	0.56
		Total	**101**	**28.38**
3	Uvea	Uveitis	34	9.55
		Hyphema	10	2.81
		Anterior synechia	2	0.56
		Iris prolapse	2	0.56
		Total	**48**	**13.48**
4	Globe	Traumatic proptosis	31	8.71
		Endophthalmitis	6	1.69
		Enophthalmos	3	0.84
		Microphthalmia	2	0.56
		Anophthalmia	2	0.56
		Total	**44**	**12.36**
5	Lens	Cataract	10	2.81
		Lens luxation	4	1.12
		Total	**14**	**3.93**
6	Retina	Retinal detachment	4	1.12
		Total	**4**	**1.12**
7	Others	Glaucoma	15	4.21
		Retrobulbar tumour	5	1.40
		Total	**20**	**5.62**
Grand Total			**356**	**100**

The most frequently reported conditions were keratitis (17.98%), conjunctivitis (12.92%), uveitis (9.55%), traumatic proptosis (8.71%), corneal ulceration (8.43%), and blepharitis (7.30%). Less common but notable conditions included glaucoma (4.21%), corneal sequestrum (3.37%), entropion (2.81%), hyphema (2.81%), cataract (2.81%), corneal degeneration (2.25%), eyelid agenesis (1.97%), corneal perforation (1.97%), traumatic wounds (1.69%), endophthalmitis (1.69%), retrobulbar tumours (1.40%), cherry eye (1.12%), descemetocele (1.12%), lens luxation (1.12%), and retinal detachment (1.12%). Rarely documented affections included enophthalmos (0.84%), eyelid hidrocystomas (0.56%), microphthalmia (0.56%), anophthalmia (0.56%), anterior synechia (0.56%), and iris prolapse (0.56%).

These findings are consistent with [a]irin *et al*. (2023), who identified a wide spectrum of feline ocular diseases, including synechia, blepharospasm, herpesvirus infection, uveal melanoma, symblepharon, lens luxation, uveitis, hyphema, descemetocele, entropion, anisocoria, and corneal damage, reporting corneal lesions as the most common pathology (14.7%). Similarly, Devecí *et al*. (2020) noted that conjunctivitis had the highest incidence in cats and dogs, while Han *et al*. (2019) identified keratitis (34.17%) as the predominant ocular disease, aligning with the present study.

***Age-wise occurrence of ocular affections*:** The age of affected cats ranged from 0 to 14 yr (Table 2). The highest incidence was recorded in the 0–1 yr age group (37.92%), followed by cats aged 1–3 yr (30.34%) and 3–6 yr (21.07%). Cats over 6 yr represented only 10.67% of the cases. Overall, 68.26% of the affected cats were under 3 yr of age, indicating a strong age-associated susceptibility.

Table 2: Age-wise occurrence of ocular affections in cats (n=356)

Sl. No.	Age group	Number of cases	Incidence (%)
1	0 to 1 yr	135	37.92
2	1 to 3 yr	108	30.34
3	3 to 6 yr	75	21.07
4	≥ 6 yr	38	10.67

This higher incidence among younger cats may be attributed to infectious causes - including Feline Herpesvirus, Feline Infectious Peritonitis, Feline Immunodeficiency Virus, Feline Leukaemia Virus, and Toxoplasma gondii - commonly confirmed in unvaccinated or partially immune kittens. Reduced maternal antibody transfer due to insufficient colostrum may further predispose kittens to these infections, as suggested by Giger and Casal (1997) and Larson and Schultz (2021). Additionally, the playful and exploratory behaviour of younger cats may

increase the risk of traumatic ocular injuries. These observations align with Park *et al.* (2023) and Bedir *et al*. (2024), who also reported a higher frequency of ocular diseases in kittens. Similar findings have been described in dogs by Akinrinmade and Ogungbenro (2015). In contrast, Bott and Chahory (2022) noted no age predisposition. The present study clearly indicates that age significantly influences the occurrence of ocular affections in cats.

***Breed-wise occurrence of ocular affections*:** Breed-wise distribution revealed the highest incidence in non-descript cats (61.24%), followed by Persian cats (38.20%) and Scottish Folds (0.56%) (Table 3). These findings correspond with those of Uzunlu *et al*. (2020), [a]irin *et al*. (2023), and Bedir *et al*. (2024). Park *et al*. (2023) also reported breed-specific tendencies such as entropion in Persian cats and eyelid agenesis predominantly in domestic or non-descript breeds - patterns that match the present study. The high representation of non-descript cats likely reflects their large population size and widespread distribution in the Mumbai region, contributing to higher clinical caseloads.

Table 3: Breed-wise occurrence of ocular affections in cats (n=356)

Sl. No.	Age group	Number of cases	Incidence (%)
1	Non-descript	218	61.24
2	Persian	136	38.20
3	Scottish Fold	2	0.56

Sex-wise occurrence of ocular affections: Male cats showed a marginally higher incidence (53.37%) compared to females (46.63%) (Table 4). Although males appeared slightly overrepresented, likely due to behavioural aggression leading to trauma, no statistically significant gender predisposition was detected. These findings are consistent with Saraiva and Delgado (2020), Bott and Chahory (2022), and Bedir *et al*. (2024), who reported no association between sex and ocular disease susceptibility.

Table 4: Sex-wise occurrence of ocular affections in cats (n=356)

Sl. No.	Age group	Number of cases	Incidence rate (%)
1	Male	190	53.37
2	Female	166	46.63

Occurrence of ocular affections according to anatomical location: Ocular affections were categorised based on anatomical localization (Table 5). The cornea was the most commonly affected structure (35.11%), followed by the adnexa (28.38%). Moderate involvement was observed in the uvea (13.48%) and

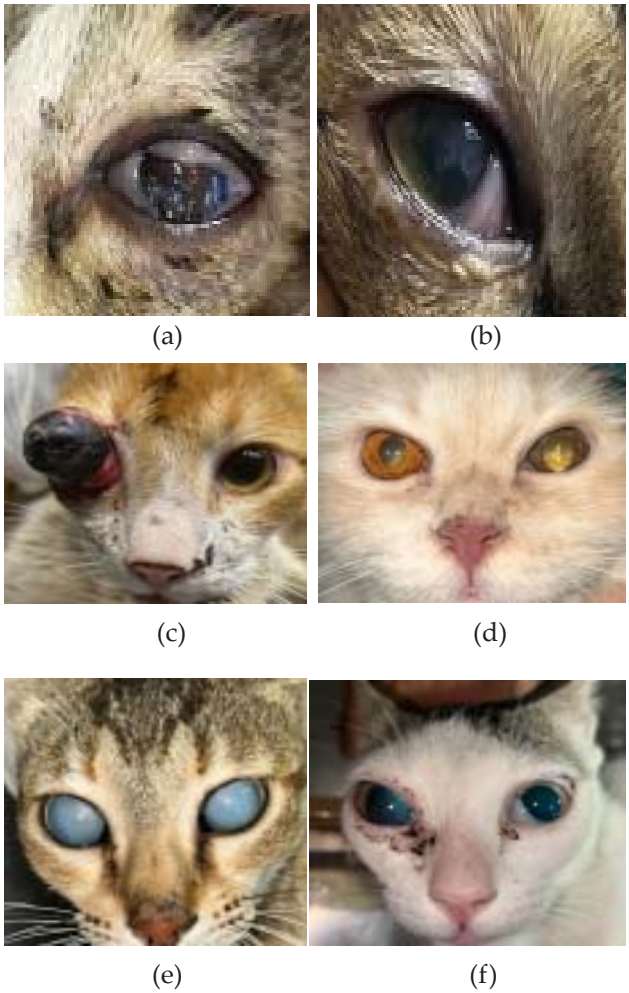

Fig.1: Ocular affections in cats (a) herpetickerato-conjunctivitis (b) corneal ulcer (c) traumatic proptosis (d) uveitis (e) cataract (f) glaucoma with retinal detachment.

globe (12.36%). Affections of the lens and retina were less frequent, accounting for 3.93% and 1.12% of cases respectively, while non-location-specific disorders represented 5.62%. Similar cornea-predominant patterns have been reported by Han *et al*. (2019), Sarfaty *et al*. (2022), and [a]irin *et al.* (2023). Park *et al*. (2023) attributed this to the recurrent and chronic nature of corneal diseases in cats. While the cornea is the most common site of disease in felines, studies in dogs highlight the lens as the predominant site of pathology, underscoring interspecies differences in ocular disease patterns. Bedir *et al.* (2024), however, reported adnexal disorders (50.2%) as the most common, followed by nasolacrimal system disorders (27.9%), demonstrating variation in disease distribution across populations.

In conclusion, ocular affections constitute a significant health concern in cats within the Mumbai region, with a notably higher incidence in cats younger than one year. Twenty-seven distinct ocular diagnoses were recorded, with herpetic keratoconjunctivitis, uveitis, traumatic proptosis, corneal ulceration, blepharitis, glaucoma, corneal sequestrum, entropion, hyphema, and cataract being the most frequently

Table 5: Occurrence of ocular affections according to anatomical location inn cats (n=356)

Sl. No.	Anatomical location	Number of cases	Incidence (%)
1	Cornea	125	35.11
2	Adnexa	101	28.38
3	Uvea	48	13.48
4	Globe	44	12.36
5	Lens	14	3.93
6	Retina	4	1.12
7	Others	20	5.62

observed. Non-descript and Persian cats were disproportionately affected, particularly with corneal pathologies. Although male cats showed a slightly higher incidence, no true gender predisposition was identified. These findings emphasize the need for early ophthalmic screening, increased awareness of infectious etiologies in young and unvaccinated cats, and targeted preventive strategies in high-risk populations.

References

Akinrinmade, J.F. and Ogungbenro, O.I. 2015. Incidence, diagnosis and management of ocular affections in dogs. Sokoto J. Vet. Sci. **13:** 9-13.

Anjana, R.R., Mahla, J.K. and Parikh, P.V. 2022. Retrospective study on incidence of equine affections reported at veterinary clinical complex, Anand, Gujarat, India. Indian J. Vet. Sci. Biotech. **18**: 91-94.

Bedir, A.G., Yanmaz, L.E., Okur, S., [a]enocak, M.G., Turgut, F., Kocaman, Y. and Baykal, B. 2024. Retrospective analysis of feline ocular diseases: insights into prevalence, breed predispositions, and anatomical localizations in a veterinary hospital in the Northeastern Anatolian Region of Turkey: 310 Cases (2016-2023). J. Faculty Vet. Med. Erciyes Univ. **21:** 168-175.

Bott, M.M.P. and Chahory, S. 2022. Epidemiology and clinical presentation of feline presumed hereditary or breed-related ocular diseases in France: retrospective study of 129 cats. J. Fel. Med. Surg. **24:** 1274-1282.

Deveci, M.Z.Y., Kirgiz, Ö., I[o]ler, C.T., Yurtal, Z., Altuð, M.E. and Gönenci, R. 2020. Prevalence of eye and eyelid diseases in cats and dogs: a retrospective study in 201 cases (2015-2019). Firat Univ. Vet. J. Health Sci. **34:** 173-177.

Giger, U. and Casal, M. L. 1997. Feline colostrum-friend or foe: maternal antibodies in queens and kittens. J. Reprod. Fertility **51:** 313-316.

Han, M.C., Saghliyan, A., Polat, E. and Ýstek, O. 2019. Evaluation of eye diseases encountered in some domestic animals: A retrospective study: 278 cases: (2002-2013). J. Harran Univ. Faculty Vet. Med. **8:** 104-107.

Kumar, P., Purohit, N.R. and Gahlot, T.K. 2016. Retrospective analysis of ocular affections in dromedary camels. J. Camel Pract. Res. **23:** 247-250.

Kumar, T., Punia, M., Agnihotri, D., Sindhu, N. and Jain, V.K. 2018.Incidence of ophthalmic affections in dogs–A short study. Int. J. Current Microbiol. Appl. Sci. **7:** 1560-1565.

Larson, L.J. and Schultz, R.D. 2021. Canine and feline vaccinations and immunology. Infectious Disease Management in Animal Shelters, 191-220.

Maggs, D.J. 2008. Basic diagnostic techniques. Slatter's Fundamentals of Veterinary Ophthalmology. St. Louis: Saunders Elsevier. pp 81-106.

Naskar, A.K., Adhikari, S., Bandopadhyay, S., Mondal, K.K., Chakravorty, A. and Sen, S. 2018. Epidemiology, types and clinical features of cases of ocular injuries attending a tertiary care teaching hospital of Eastern India. Int. Surg. J. **5:** 1072–1078. https://doi.org/10.18203/2349-2902.isj20180833

Park, J., Kang, S., Lee, E. and Seo, K. 2023. Prevalence of feline ophthalmic disorders in South Korea: A retrospective study (2009–2021). J. Fel. Med. Surg. **25:** 1-11.

Pawde, A.M. 2006. Ocular affections in domestic animals: incidence, therapeutic and surgical management. Indian J. Vet. Surg. **27:** 135-135.

Ranjan, R., Nath, K., Naranware, S., and Patil, N.V. 2016. Ocular affections in dromedary camel-a prevalence study. Intas Polivet **17:** 348-349.

Sale, M., Jhala, S., Parikh, P.V., Patil, D.B., Joy, N. and Ranpariya, J.J. 2013. Incidence of ophthalmic affections in dogs (2004–13). Indian J. Vet. Surg. **34:** 61-62.

Saraiva, I.Q. and Delgado, E. 2020. Congenital ocular malformations in dogs and cats: 123 cases. Vet. Ophthalmol. **23:** 964-978.

Sarfaty, H., Ezra Elia, R. and Sebbag, L. 2022. Prevalence and characteristics of ocular diseases in Sphynx cats: A retrospective assessment (2012-2021) and comparison with non-Sphynx cats. Vet. Ophthalmol. **25:** 367-375.

[a]irin, Ö.[a]., Çetin, M.N. and Neyse, B. 2023. Evaluation of eye diseases in cats and dogs: a retrospective study: 200 cases (2021-2022). Vet. J. Mehmet AkifErsoy Univ. **8:** 44-49.

Tamilmahan, P., Zama, M.M.S., Pathak, R., Muneeswaran, N.S. and Karthik, K. 2013. A retrospective study of ocular occurrence in domestic animals: 799 cases, Vet. World **6**: 274-276.

Thangadurai, R., Sharma, S., Bali, D., Rana, B.P., Mahajan, V., Samanta, I. and Hazra, S. 2010. Prevalence of ocular disorders in an Indian population of horses. J. Equine Vet. Sci. **30:** 326-329.

Uzunlu, E.O., Aras, S., Zamirbekova, N., Akyol, E.T. and Arýcan, M. 2020. Common eye diseases in cats and dogs: a retrospective study (2018-2019). Bozok Vet. Sci. **1:** 17-22.