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Incidence of different types of eye affections in dogs

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Abstract

The study aimed to record the incidence of different eye affections in dogs. A total of 3433 animals were registered at Veterinary Clinical Complex (VCC), CoVSc & A.H. and Divisional Veterinary Hospital, Bicchiya, Rewa, Madhya Pradesh, during a period of five months (August 1st 2025 to January 1st 2026). Out of these animals, 1441 (41.97%) cases of dogs were referred to respective Surgery Department for assessment and treatment, of which 62 (1.81%) dogs were suffering from various eye affections. Among the various eye affections, cataract was noted to be most common at 32.26%, followed by corneal ulcer (16.13%), conjunctivitis (14.52%) and other eye affections were observed in decreasing order. Mongrel (non-descript) was mostly affected among all breeds with distribution of 35.48% of cases, and age group 4-10 years showed highest incidence at 45.20%. Male dogs (68.37%) were more commonly affected than females.

Keywords: Dogs, eye affections, incidence, corneal ulcer

Introduction

Eye diseases in dogs are commonly encountered in veterinary practice and often lead to discomfort, impaired vision and in severe cases blindness. Conditions such as cataract, corneal ulcer, conjunctivitis and glaucoma are among the frequently reported ocular disorders in canines Pandey *et al.* (2018) [5]. Some of these conditions develop gradually, others progress rapidly and require immediate attention.

Despite their importance, regional data on the incidence and distribution of eye diseases in dogs remains limited. Therefore, the present study was undertaken to assess the incidence of various eye affections in dogs along with their distribution based on type, breed, age and sex.

Materials and Methods

The study was conducted over a period of five months from August 1st, 2025 to January 1st, 2026. A total of 3433 clinical cases presented at Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, Rewa and Divisional Veterinary Hospital, Bicchiya, Rewa, Madhya Pradesh were recorded. Among these, 1441 cases were of dogs referred for further evaluation.

Among the dogs examined, 62 cases (1.81%) were diagnosed with different types of eye problems (Table 1). All dogs brought during the study period were checked regardless of their breed, age or sex. A routine eye examination was performed to detect various ocular conditions, and the observations obtained were analyzed to study the incidence pattern of eye affection.

Table 1: Overall incidence of eye affections

Sr. No.	Detail of cases	No. of cases	Percent
1.	Total cases	3433	—
2.	Referred to VSR	1441	—
3.	Various eye affections	62	1.81%
4.	Corneal ulcers	10	0.29%

Results and Discussion

Overall Incidence

Out of 1441 canine cases, 62 dogs were diagnosed with various ocular affections, giving an overall incidence of 1.81%. Corneal ulcer was observed in 10 cases (0.29%). The incidence observed in the present study is comparable with previous reports by Pandey *et al.* (2018)^[5] and Mishra *et al.* (2021)^[4], though lower than some earlier findings

(Akinrinmade and Ogungbenro, 2015)^[1].

Incidence of various eye affections

During the study period a total of 62 dogs were screened for eye affections, out of which cataract was noted in 20 cases which accounted for 32.26%, followed by corneal ulcer with 10 (16.13%), conjunctivitis 9 (14.52%), glaucoma 6 (9.68%) and accidental injury 3 (4.84%) cases (Table 2, Fig. 1).

Table 2: Distribution of eye affections (n = 62)

Sr. No.	Eye affection	Cases	Percent
1.	Cataract	20	32.26%
2.	Corneal ulcer	10	16.13%
3.	Conjunctivitis	9	14.52%
4.	Glaucoma	6	9.68%
5.	Accidental injury	3	4.84%
6.	Protrusion of eyeball	3	4.84%
7.	Cherry eye	3	4.84%
8.	Wound (eyelid/bite/lacerated)	2	3.23%
9.	Pigmentary keratitis	2	3.23%
10.	Dermoid cyst	1	1.61%
11.	Entropion	1	1.61%
12.	Fungal keratitis	1	1.61%
13.	KCS	1	1.61%

The findings reported is in agreement with the findings of Pandey *et al.* (2018)^[5] who observed highest incidence of cataract (38.52%) followed by corneal ulcer (13.11%) and in partial agreement with the findings of Ramani *et al.* (2012)^[7] who observed highest incidence of cataract in dogs (23.12%) followed by corneal ulcer (14%) and Kokde *et al.* (2025)^[2] who found cataract to be one of the most commonly observed ocular condition with incidence of 20% and Mishra *et al.* (2021)^[4] who recorded an incidence rate of 17.61%, 17.04% and 5.68% for cataract, corneal ulcer and pigmentary keratitis respectively.

The highest incidence of cataract in the study might be due to the fact that dog owners often neglect ocular affections unless and until vision is compromised. There might be other conditions in the population, but it often remain unreported since it does not impair vision. Once vision is hampered, the owner brings the case to veterinarian, and cataract is an ailment where vision is vitiated. 16.13% of incidence was found to be of corneal ulcer, which might be influenced by climatic conditions such as hot, dusty or humid environment.

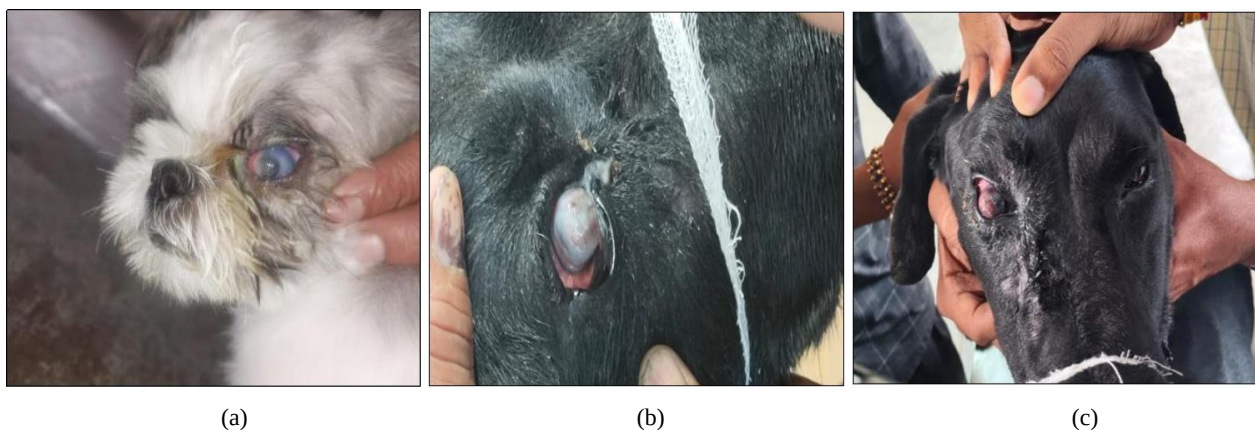


Fig 1: Screening of animals at VCC, CoVSAH, Rewa and DVH, Bicchiya-(a) Glaucoma (b) Cataract (c) Protrusion of eye ball

The predominance of cataract may be due to delayed reporting by owners until vision was noticeably affected.

Breed-wise Incidence

In the current study, among different breeds of dogs, the highest distribution of ocular affections was documented in Mongrel (35.48%) and Pug (30.65%), followed by Shih-Tzu (12.90%), Indian Spitz (6.45%), Labrador Retriever (4.84%), German Shepherd (4.84%), Boxer (3.23%) and Rottweiler (1.61%). The data recorded are presented in Table 3.

Table 3: Breed-wise distribution (n = 62)

Breed	Cases	Percent
Mongrel/ND	22	35.48%
Pug	19	30.65%
Shih-Tzu	8	12.90%
Indian Spitz	4	6.45%
Labrador Retriever	3	4.84%
German Shepherd	3	4.84%
Boxer	2	3.23%
Rottweiler	1	1.61%

The finding of present study corroborate the results of Pandey *et al.* (2018) ^[5], who reported highest incidence in Mongrel (nondescriptive) dogs (38.62%), in partial agreement to this Kumar *et al.* (2018) ^[3] reported Pug to be the most prevalent breed (28.3%) and Patel *et al.* (2020) ^[6] observed maximum incidence in Pug (51.51%) followed by Pomeranian (15.15%), Mongrels (12.12%) and Shih-Tzu (9.09%). The discrepancy between the present observations and the results of Kumar *et al.* (2018) ^[3] and Patel *et al.* (2020) ^[6] might largely be due to the presence of breed-specific dog population at larger cities like Hisar and Anand. Compared to this, Rewa has a higher population on nondescript dogs, because of their preference in middle-class households. However, a nondescript population was followed by Pug and Shih-Tzu due to their hereditary predisposition, which is in agreement with Kumar *et al.* (2018) ^[3] and Patel *et al.* (2020) ^[6].

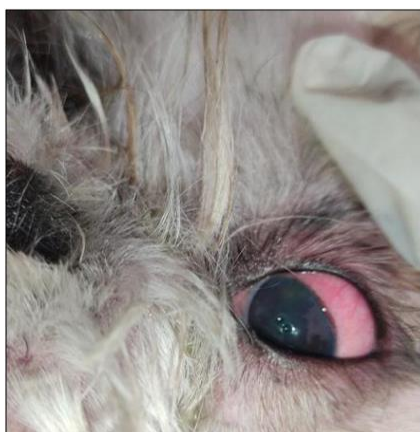


Fig. 2: Shih Tzu presenting corneal ulcer in the central cornea

The higher occurrence of ocular affections in Mongrel dogs observed in the present study may be associated with their comparatively larger population in and around the study area, as these dogs are commonly maintained by households due to their adaptability and lower maintenance requirements. In addition, many mongrel dogs are allowed to roam outdoors, increasing their exposure to dust, trauma and environmental irritants, which may contribute to eye problems.

On the other hand, brachycephalic breeds such as Pugs showed a high incidence of ocular disorders because of their characteristic skull conformation and prominent eyeballs. Their shallow eye sockets, wider palpebral fissure and incomplete eyelid closure make the cornea more exposed and vulnerable to irritation, drying and injury. These anatomical features predispose them to conditions like corneal ulceration, pigmentary keratitis and conjunctivitis.

Age-wise Incidence

In the current study, prevalence of ocular affections varied across different age groups with the highest incidence in dogs aged between 4-10 years (45.20%), followed by dogs aged more than 10 years (30.60%) and 0-3 years (24.20%) of age. The data collected is presented in Table 4.

Table 4: Age-wise distribution (n = 62)

Age group (years)	Cases	Percent
0-3	15	24.20%
4-10	28	45.20%
>10	19	30.60%

The incidence was comparatively low in young dogs. The findings are in accordance with the results of Pandey *et al.* (2018) ^[5], who documented that the majority of the animals with eye affections were in the age group of 6 to 10 years (47.54%) and 11-15 years (31.96%).

Contrary to this Kokde *et al.* (2025) ^[2] reported a different distribution, with animals of 0-3 years of age showing an incidence at 34%. Whereas, Akinrinmade and Ogungbenro (2015) ^[1] reported that most of the eye affections observed in dogs were in the age group less than 5 years (75%) of age.

The higher incidence in middle-aged to senile dogs might be attributed to the onset of degenerative and chronic conditions that start appearing around this age. Several factors, including longer exposure to environmental irritants (dust or pollen), weaken eye tissues over time; systemic diseases such as diabetes or hypertension start showing secondary effects; a more sensitive and thinner cornea prone to scratches or trauma; the overall ageing process, which slows healing and reduces eye resilience; and the bigger portion of older dogs in the pet population.

Sex-wise Incidence

A greater proportion of ocular disorders (63.37%) was observed in male than in female (31.63%) dogs during the course of the study. Table 5 illustrate the incidence noted.

Table 5: Sex-wise distribution (n = 62)

Sex	Cases	Percent
Male	43	68.37%
Female	19	31.63%

These findings are in harmony with the observations of Pandey *et al.* (2018) ^[5] and Kokde *et al.* (2025) ^[2], who observed a higher incidence of eye affections in males compared to females, which was 70.49% in male and 29.50% in female and 61.33% in males and 38.66% in females, respectively.

The greater gender wise disparity of eye affections in this study might be due to the biased greater preference for male dogs in households, leading to their larger population. Hormonal influences might also contribute to this increase. Testosterone influenced behaviours like aggression and fighting, might predispose male dogs to ocular trauma.

Conclusion

The present study revealed that ocular affections in dogs occurred with an incidence of 1.81%. Cataract was the most prevalent condition observed. Mongrel and Pug breeds were more frequently affected, with middle-aged and male dogs showing higher susceptibility. Although the incidence was relatively low, the clinical significance of these conditions is considerable, as they may lead to vision impairment if left untreated. Early diagnosis and timely intervention remain essential for effective management.

Conflict of Interest

All authors declare that they have no conflict of interest.

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