Studies on keratoconjunctivitis sicca incidence in crossbred dogs

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Abstract

The present study was aimed at determination of keratoconjunctivitis sicca occurrence in crossbred dogs. The investigations covered 36 mongrel dogs with keratoconjunctivitis sicca recognized by the ophthalmic examination. Patients' age and sex was established. The ophthalmic evaluation protocol included: the conjunctiva examination (humidity, redness, discharge), the corneal examination (transparency, vessel ingrowth, pigmentation, defects), Schirmer tear test.

The highest incidence among the crossbred dogs was reported between 6 and 9 year of age, males accounted for 64% of cases. In a clinical study involving 61 corneas, 10 appeared to be completely opaque. The pigmentation occured in 75% of corneas. The corneal defects were found in 50% of cases. A 10-15 mm/min Schirmer test was established in 29% while 0-5 mm/min in 28% of cases.

Key words: keratoconjunctivitis sicca, crossbreed dogs, incidence

Introduction

Keratoconjunctivitis sicca (KCS) – commonly called as “dry eye syndrome” is an oftencound ocular disease. This disorder is characterized by an inadequate tear production or/and abnormal composition of lacrimal film resulting in progressive inflammatory condition of the cornea and conjunctiva. If KCS is left untreated or the medical treatment is inappropriate, it can cause impaired vision or even the loss of vision.

There are numerous causes of KCS. They include among others, exposure to drugs that damage lacrimal glands, irradiation, neurogenic disorders, iatrogenic tear deficiency (excision of the third eyelid lacrimal gland), canine distemper, metabolic diseases (diabetes, hyperthyroidism), eye and orbit trauma, vitamin A deficit. The most common cause of KCS, however, appears to be autoimmune – destruction of the lacrimal gland tissue by immune system (Whitley et al. 1991, Gionfriddo 1995, Kaswan et al. 1995, Trbolova 2005).

Kaswan et al. (1991) found that aging contributes to the increased KCS incidence in animals, those over 7 years-old are affected most often. The studies also showed that females are more prone to this disease than males and the substantial differences connected with a sex are mostly observed in West Highland White Terrier (Barnett and Samson 1987). It was also noted that castrated dogs, irrespective of their age, are more likely to develop the tear deficiency syndrome (Whitley et al. 1991, Hartley et al. 2006).

The medical literature draws special attention to some dog breed-associated predilection for KCS occurrence. The studies usually include the groups of purebred dogs (Hamor et al. 2000). Out of 30 dogs with KCS recognized, only 2 animals were crossbred...