

THE IMPORTANCE OF THE STRESS IN THE ETIOLOGY OF THE CHRONIC SUPERFICIAL KERATITIS IN GERMAN SHEPHERD

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Summary

The chronic superficial keratitis in German shepherd or pannus is the subepithelial proliferation of vessels and connective tissue in cornea. It is a frequent disease in German Shepherd characterized by corneal superficial opacity and gray to red roughened covering this structure of the eye.

Although the aetiology of the disease is thought to be immune mediated, the studies made in Surgery Department of the Faculty of Veterinary Medicine revealed that stress is the most important element in trigger and recurrence of the disease.

Key words: cornea, chronic superficial keratitis, stress

Materials and methods

Between January 2001 and December 2006, one study was made in Surgery Department of the Faculty of Veterinary Medicine Bucharest, of 96 dogs with recurrence of the chronic superficial keratitis. The dogs, male and female, have four to seven years old. The females have given birth in their life and have healthy puppies.

In this study was included all the German shepherd that have chronic superficial keratitis and it been treated with Optimmune. After four months to two year, all the cases have another episode of chronic superficial keratitis.

All the recurrences were because of the stress. We studied the causes of the recurrences and the results were very interesting.

Results and discussions

In 41 female cases the lesions begins as an area of vascularization (fig. 1) and granulation (fig. 2) at the temporal limbus of the cornea, usually in both eyes. The evolution is fast and soon, in one month, the female is often blindness (fig. 3, fig. 4). All these female have maternity problems: giving birth to 8 to 12 puppies, to many puppies to nursering and feeding.

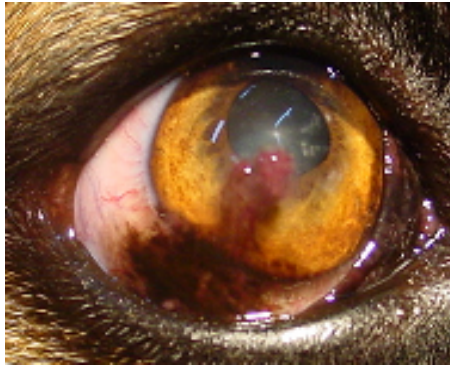


Fig. 1 – Right eye with chronic superficial keratitis; the corneal vascularization on the temporal limbus

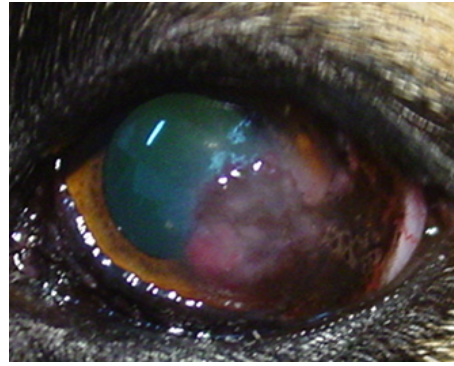


Fig. 2 – Left eye with chronic superficial keratitis; the corneal granulation and pigmentation on the temporal limbus

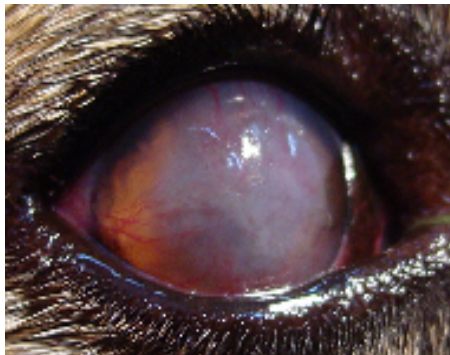


Fig. 3 – Right eye with chronic superficial keratitis
The entire cornea is opaque with many vessels and the bitches is blind



Fig. 4 – Left eye with chronic superficial keratitis
The entire cornea is opaque with pigmentation and the bitches is blind



Fig. 5 – Both eyes with chronic superficial keratitis
The inferior half of the cornea is opaque with vascularization and granulation

In 10 cases with chronic diseases and 20 cases that have surgery the pannus has a long evolution and in five months only the inferior half of the cornea has vascularization, granulation and pigmentation (Fig. 5). Some cases develop heavy pigmentation which obscures the underlying inflammatory reaction (Fig. 6).



Fig. 6 – Right eye with chronic superficial keratitis
The inferior half of the cornea is opaque with heavy pigmentation but the dog see

In 5 cases, the owner left the country and the dog was given to another person, usually, a family member. The dog was apatic and refused the food many days. In 3 to 6 weeks the corneal disease appeared. The neovascularization was very important and the anterior epithelium crop out and the fluoresceine test was positive (Fig. 7).

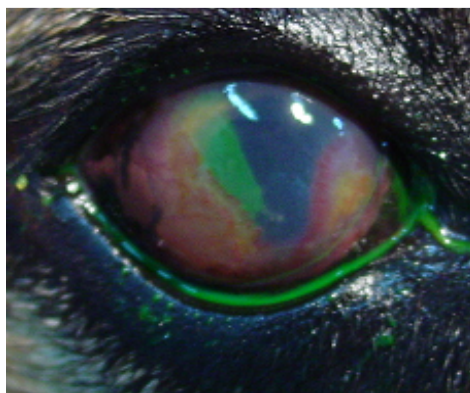


Fig. 7 – Right eye with chronic superficial keratitis
The most entire of the cornea is opaque with neovascularization
The fluoresceine test is positive

In 11 cases the dogs have moved on the country side or on the mountain where the owner built a new house. The dog is only in weekend with the owner. The debut of the corneal disease was in 5 months after moving out and the lesions were quite invasive, with pigmentation, vascularization and granulation (Fig. 8). In 3 cases the dogs became blind.



Fig. 8 – Right eye with chronic superficial keratitis
The most entire cornea is opaque with neovascularization and granulation

In 9 cases the stress which determinate the disease, was after the coming of a new baby or new pets in his home. The evolution was very fast and the

animals became blind. The entire cornea was opaque with neovascularization, edema and pigmentation (Fig. 9 and Fig. 10).

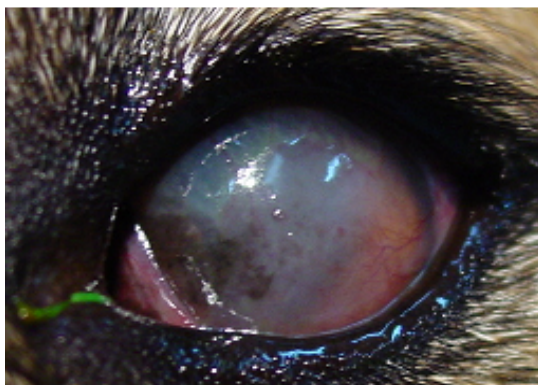


Fig. 9 - Left eye with chronic superficial keratitis
The entire cornea is opaque with pigmentation and vascularization and the dog is blind



Fig. 10 - Left eye with chronic superficial keratitis
The cornea is opaque with pigmentation and vascularization

Results and discussions

The most important stress is in 41 female with maternity problems. The lesions begin as an area of vascularization and granulation, usually in both eyes.

The evolution is fast and soon, in one month, the female is often blindness. The treatment with Optimmune and the ovariohysterectomy are the right solutions.

In 10 cases with chronic diseases and 20 cases that have surgery the pannus has a long evolution and in five months only the inferior half of the cornea has vascularization, granulation and pigmentation. The treatment with Optimmune to healing the cornea, is made for 6 months.

In 5 cases, the owner left the country and the dog was given to another person, a family member. The treatment is made for a long time, more than one year.

In 11 cases the dogs have moved on the country side or on mountain where the owner built a new house. Here the dog is only in weekend with the owner. The debut of the corneal disease was in 5 months after moving out and the lesions were quite invasive, with pigmentation, vascularization and granulation. In 3 cases the dogs became blind. The treatment with Optimmune is for more than one year.

In 9 cases the stress which determinate the disease, was after the coming of a new baby or new pets in his home. The evolution was very fast and the animals became blind. The entire cornea was opaque with neovascularization, edema and pigmentation and it was necessary 6 months to healing the cornea.

Conclusions

1. The chronic superficial keratitis in German Shepherd is a very common corneal disease in this breed which appeared at the age of four to seven years old.
2. Diagnosis of pannus is easy to assess by clinical signs when bilateral proliferative keratitis is present in typical breed.
3. The recurrences are frequent in very stressful dogs that are bearing, nursing and lactation. Although the chronic diseases, surgery, changing the home or the owner, moving abroad of the owner, coming of a new baby or new pets in his home are the very important reasons for a new onset of the keratitis.
4. The bitches stress binding of maternity can be easy removed doing ovariohysterectomy.
5. The other types of stress must be evaluated and removed. But the most important thing is teaching the owner about managing the stress and the recurrences of the disease.

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