



## **Degenerative Pannus**

### **What is degenerative pannus?**

Degenerative pannus, also known as chronic superficial keratitis, is an immune-mediated disease in which there is blood vessel in-growth into the cornea (the normally clear surface of the eye). This condition is not painful, but pannus can result in vision loss because if it is not controlled, scarring and brown pigmentation of the cornea can develop. The most common breeds that develop degenerative pannus are German shepherds or German shepherd crosses and grey hounds, but any breed of dog may develop pannus.

### **What are the signs of pannus?**

Dogs with degenerative pannus will typically initially develop redness or cloudiness at the outer edge of the cornea. The condition, if left untreated, can slowly progress to involve the entire cornea. Some dogs with pannus will also develop thick eye discharge. A similar condition that involves the third eyelid of dogs is called atypical pannus, or plasmoma. This condition results in redness and thickening of the third eyelid.

### **What causes pannus?**

In addition to immune-mediated attack of the body's own (ocular) tissues, ultraviolet light plays a role in the development and progression of pannus. For this reason, dogs that live at high altitude or low latitude are more likely to develop severe degenerative pannus that is less responsive to treatment. Genetic factors are also thought to play a role in this condition.

### **How is pannus treated?**

Pannus is treated with topical anti-inflammatory medications including a topical steroid and cyclosporine. Treatment is initiated at a higher frequency and slowly tapered to the lowest level that maintains control of the disease. The goal is to control any active disease, which is characterized by the presence of blood vessels within the cornea. Generally, any pre-existing scarring or pigmentation of the cornea at the time of initiation of treatment is permanent. However, in some cases, the corneal pigmentation can reduce with long-term treatment with topical cyclosporine. Atypical pannus (plasmoma) is treated similarly.

It is also important to reduce exposure to UV light by limiting your dog's time outside during the peak afternoon hours, particularly in the summer. Provide shade as much as possible, or keep your dog indoors during the day. Alternatively, you may purchase tinted goggles designed for dogs (called Doggles), which are tolerated by many dogs and can help reduce the progression of the disease.

### **What is the prognosis?**

In Wisconsin, the prognosis for degenerative pannus, if caught early, is usually very good. However, life-long treatment with a topical anti-inflammatory medication is usually necessary to maintain control of the disease.