PANNUS (CHRONIC SUPERFICIAL KERATITIS)

Pannus is an immune-mediated disease of obscure cause in dogs. It occurs most commonly in German shepherds or shepherd crosses, but can occur in any canine breed. It typically begins as a raised, red and/or pigmented plaque at the lateral cornea, is, usually bilateral, and often symmetrical. The third eyelid may also be involved. The disease may progress from the lateral cornea to involve the medial, ventral, and dorsal quadrants, respectively, and animals may become clinically blind with severe involvement. Animals are not usually painful but frequently have mucopurulent discharge. Age of onset is usually 3-5 years but may occur at anytime. If the dog is affected at a young age, disease is usually worse. Besides breed, high altitude is the greatest risk factor for pannus, with solar radiation being the influencing factor. Diagnosis is based on typical signalment, clinical appearance, and corneal/conjunctival cytology or histology, which is characterized by plasma cells, lymphocytes, blood vessels and pigment. The term "atypical pannus" refers to the same disease process in a breed other than the German shepherd dog or to cases where the nictitans is involved exclusive of the cornea. This term is perhaps misleadingly since there is nothing atypical about the histologic/cytologic appearance, diagnostic approach, or treatment of atypical pannus.

Pannus is controlled, not cured. Any treatment should therefore be considered an attempt to minimize clinical signs and/or disease progression. Topical corticosteroid therapy will control many cases, however potent corticosteroids such as prednisolone or dexamethasone should be used rather than hydrocortisone. Twice daily therapy is reasonable initially in mild to moderately severe cases. Response to therapy should be assessed in about 2-4 weeks. Complications of chronic topical corticosteroid use such as increased susceptibility to infection and ulceration, delayed wound healing, suppression of the adrenocortical axis, and corneal lipid degeneration should be considered. Subconjunctival steroids may be used as an alternative or adjunct to frequent topical therapy in more severe cases or cases in which owner compliance is problematic. Additional side effects of subconjunctival injections include granuloma formation, vehicle residue plaques, and inability to rapidly cease therapy. Consideration of these concerns makes topical therapy preferable in most cases.

The need for chronic therapy has led to the search for safe alternatives to corticosteroids. Cyclosporine is a potent immunomodulatory drug with specific effects on lymphocyte function. Topical application on a debilitated or ulcerated cornea also is safe. Cyclosporine is therefore a logical first choice for many cases of pannus. Cyclosporine is effective when used alone in many cases and synergistic when used with topical corticosteroids. Combined therapy may afford better control of more resistant cases or permit reduction in frequency of corticosteroid therapy. Therapy can frequently be tapered during winter months. Additional forms of therapy are reserved for cases that respond inadequately to medical therapy and include ~-irradiation or lamellar keratectomy.