Cyclosporin A treatment in intrinsic canine atopic dermatitis (atopic-like dermatitis): open trial study

M. Fujimura, Y. Nakatsuji, H. Ishimaru

Abstract

In this study, dogs were separated into two groups and treated with immunosuppressant (Cyclosporin A: CsA). The first group was the canine atopic dermatitis (CAD) group, which is similar to extrinsic atopic dermatitis (AD) in humans (treated with a CsA dose of 2.5-5.5 mg/kg, n=8), and the second group was the canine atopic-like dermatitis (ALD) group, which is similar to intrinsic AD in humans (treated with a CsA dose of 2.5-6.5 mg/kg, n=14). The canine atopic dermatitis extent and severity index (CADESI)-4 was evaluated before treatment (PRE) and after treatment (POST) to assess the effectiveness of CsA for the two groups. In the CAD group, CADESI-4 showed no change (PRE: 79±29, POST: 77±28) and out of the eight dogs, no dogs showed complete remission, three dogs showed partial remission, and five dogs showed no effect. Whereas in the ALD group, CADESI-4 showed a significant reduction (PRE: 61±42, POST: 32±25, p<0.01) and out of the 14 dogs, 11 dogs showed complete remission, two dogs showed partial remission, and one dog showed no effect. The results indicate that the immunosuppressant showed effectiveness for the dogs diagnosed with ALD. One dog had to be treated for a year and eight months, which was the longest period in the study, this dog presented with hyperplasia of the lymphoidgland and mammary tumor.

Key words: cyclosporine A, canine atopic dermatitis, canine atopic-like dermatitis, intrinsic

Introduction

In humans, atopic dermatitis (AD) has been divided into the extrinsic and intrinsic type (Brenninkmeijer et al. 2008, Kabashima et al. 2013). Extrinsic AD has high concentrations of total IgE and positive allergen-specific IgE levels whereas intrinsic AD is characterized by the absence of allergen-specific IgE (Brenninkmeijer et al. 2008). In the immune system, extrinsic AD is Th2-dominant which shows immediate (type 1) hypersensitivity and constitutes about 80% of AD, and intrinsic AD is Th1-dominant and constitutes about 20% of AD (Kabashima et al. 2013). In the veterinary field, there are some reports of dogs diagnosed with AD with the absence of allergen-specific IgE (Brenninkmeijer et al. 2008). In the immune system,