

The use of ciclosporin in canine and feline dermatology. Part: 2

Marcel Kovalik DrVetMed PhD MRCVS Senior Clinical Scholar in Veterinary Dermatology

Adri van den Broek BVSc DVR PhD FRCVS Professor of Veterinary Immunodermatology

UNIVERSITY OF EDINBURGH, HOSPITAL FOR SMALL ANIMALS, EASTER BUSH VETERINARY CENTRE, ROSLIN, MIDLOTHIAN. EH25 9RG

INTRODUCTION

Ciclosporin (CsA) is licensed for veterinary use only for the management of canine atopic dermatitis. However, despite being very expensive compared to glucocorticoids (GCs), CsA is beginning to rival GCs in the range of cutaneous conditions it is employed to manage. This is because its efficacy is comparable to that of GCs and side effects are relatively mild and infrequent.

Although licensed for use only in the management of canine atopic dermatitis, its value in the treatment of canine perianal fistulae is well established and it is employed with increasing frequency in the management of feline hypersensitivity conditions. CsA has also been employed with variable success in the treatment of other cutaneous conditions of cats and dogs. It appears to be less effective in controlling autoimmune and immune-mediated conditions.

This second article on CsA will list the conditions for which it has been used, its contraindications and the typical protocols employed to manage inflammation, including dosage regimes used during induction and maintenance. In addition, possible treatment protocols for specific skin conditions, such as canine atopic dermatitis, perianal fistulae, pemphigus foliaceus and feline allergic dermatoses, will be discussed.

INDICATIONS FOR CICLOSPORIN THERAPY IN CANINE DERMATOLOGY

CsA is licensed for use only in dogs and its efficacy has been adequately demonstrated only in the management of canine atopic disease and perianal fistulae. However, despite its cost it is currently in vogue and a survey of the literature indicates that it has been employed with varying success in the management of several cutaneous conditions. For convenience these conditions, listed below, are grouped with an indication of the efficacy of treatment with CsA.

Although generally administered orally, CsA has occasionally been applied topically. However, percutaneous penetration is poor and, if indicated, topical application of tacrolimus, also a calcineurin inhibitor, is preferable. As a general rule, CsA should be used only after a definitive diagnosis has been made and treatment of underlying or predisposing factors has been included in the management protocol.

Conditions for which the **efficacy of CsA is well established:**

- canine atopic dermatitis (Guaguere & Fontaine, 2004; Guaguere *et al.*, 2004; Olivry *et al.*, 2002; Radowicz & Power, 2005; Steffan *et al.*, 2006; Steffan *et al.*, 2005)
- perianal fistulae (Doust *et al.*, 2003; Hardie *et al.*, 2005; O'Neill *et al.*, 2004; Patricelli *et al.*, 2002).

Conditions for which there is **good evidence of efficacy** – several reports of 50% of cases treated responding well:

- sebaceous adenitis (Linek *et al.*, 2005).

Conditions for which there is **limited evidence of efficacy** – only a few case reports of a good response to treatment:

- idiopathic sterile nodular panniculitis (Guaguere *et al.*, 2004)
- alopecia areata (Noli & Toma, 2006)
- chronic pedal furunculosis (Breathnach *et al.*, 2005; Robson & Burton, 2003)
- German Shepherd Dog deep pyoderma (Robson & Burton, 2003)
- metatarsal sinus tracts (Oliveira *et al.*, 2007; Robson & Burton, 2003)
- sterile pyogranulomatous syndrome (Robson & Burton, 2003)
- erythema multiforme (Robson & Burton, 2003)
- follicular hyperkeratosis of Cocker Spaniels (Robson & Burton, 2003)
- primary seborrhoea in the West Highland White Terrier, Cairn Terrier and Springer Spaniel (Guaguere *et al.*, 2004)
- end-stage proliferative otitis externa in Cocker Spaniel and Golden Retriever (Hall *et al.*, 2002).

Conditions for which it **may be of benefit:**

- pemphigus foliaceus – when combined with glucocorticoids (Maeda *et al.*, 2008)
- vesicular cutaneous lupus erythematosus – employed in combination with ketoconazole (Font *et al.*, 2006)
- cutaneous reactive histiocytosis – employed in combination with ketoconazole (Palmeiro *et al.*, 2007)
- cutaneous lupus erythematosus – effective at a high dose but accompanied by unacceptable side effects (Rosenkrantz *et al.*, 1989).

