PSORIASIFORM-LICHENOID-LIKE DERMATOSIS DUE TO STAPHYLOCOCCAL INFECTION IN A SHIH TZU DOG

Psoriasiform-lichenoidachtige dermatosis door een stafylokokkeninfec tie bij een Shih Tzu hond

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SUMMARY

A 19-month-old, male Shih Tzu dog was examined for psoriasiform lesions on the concave aspect of both ear pinnae. On histopathology a band-like superficial dermatitis with lympho-plasmacytic infiltrate was observed. A coagulase-positive hemolytic *Staphylococcus* (*S. intermedius*) was isolated from the skin lesions. Treatment with cephalexin resulted in complete resolution of the lesions. This case showed similarities with the psoriasiform lichenoid dermatitis in English Springer Spaniels.

SAMENVATTING


INTRODUCTION

Psoriasiform lesions are erythematous scaling papules that may coalesce to form plaques, as seen in psoriasis in man. Histologically there is epidermal hyperplasia, which is characterized by accentuated, elongated rete ridges (Christophers et al., 1987).

Lichenoid tissue reaction characterizes a band-like infiltrate of cells in the upper dermis, which often obscures the dermal-epidermal junction (Gross et al., 1986). Lichenoid dermatosis is a rare, usually idiopathic skin disorder of dogs and cats (Scott, 1984; Scott, 1995; Scott et al., 2000). It is characterized by asymptomatic, symmetric, erythematous, scaly to hyperkeratotic, flat topped papules (Scott, 1984). The cause and pathogenesis of most of these dermatoses are unclear (Scott et al., 2000). However, a lichenoid tissue reaction in response to staphylococcal infection has been described (Scott, 1984).

A psoriasiform lichenoid dermatosis has been described in English Springer Spaniels. The dermatosis manifests as asymptomatic, generally symmetric, erythematous, lichenoid papules and plaques initially noted on the pinnae, in the external ear canal, and in the inguinal region. With time, the lesions become increasingly hyperkeratotic and spread to involve the face, ventral trunk, and perineal area (Gross et al., 1986; Mason et al., 1986; Burrows et al., 1994; Scott et al., 2000).

This paper describes clinical and histopathological features that are both psoriasiform and lichenoid and show similarities with the psoriasiform lichenoid dermatosis of English Springer Spaniel dogs.

CASE REPORT

A 19-month-old entire male Shih Tzu weighing 8.6 kg was presented with gradual onset of crusting lesions on the ear pinnae without pruritus. Over a period of four months, various topical medicaments containing a combination of antimicrobials and glucocorticosteroids led to only marginal improvement. Worse-
ning of the lesions followed administration of oral prednisolone at 1.2 mg/kg once daily for 14 days. A littermate living in the same household was not affected.

On physical examination the dog was in good health, alert and responsive. The lesions were restricted to the concave aspects of both ear pinnae; no abnormalities were seen on physical examination of both ear canals. The lesions consisted of psoriasiform erythematous papules and plaques, many of which were annular in configuration and covered with a thick brown/yellow crust (Figs. 1 and 2). No ectoparasites or dermatophytes were detected on microscopical examination of skin scrapings and plucked hairs. Dermatophyte culture of crusts was negative after 3 weeks inoculation on Sabouraud’s dextrose agar. A heavy growth of a coagulase-positive haemolytic Staphylococcus (S. intermedius) and a sparse growth of Malassezia pachydermatis were obtained from one of the plaques. The Staphylococcus was sensitive to cephalaxin. Routine hematology, blood biochemistry and urinalysis were all within normal limits. The histopathology of excisional skin biopsies revealed hyperkeratosis with acanthosis of the epithelium. There was a dense interface mononuclear (lymphocytic and plasma cell) infiltrate but the basal layers did not have hydropic degeneration. The epithelial changes continued down the follicular external root sheath. No mites, bacteria, yeasts or dermatophytes were seen. These findings were consistent with a band-like superficial dermatitis with lympho-plasmacytic infiltrate (Figs. 3 and 4).

A presumptive diagnosis of psoriasiform-lichenoid-like dermatosis was made. All topical medication was stopped and the dog was treated with oral cephalaxin (Ceporex, Shering-Plough Animal Health) at 15 mg/kg twice daily. After two weeks of cephalaxin treatment there was a marked improvement of the lesions. Another 3 weeks of treatment showed a complete resolution of the lesions and the cephalaxin was discontinued. Three years after the treatment was stopped, no recurrence has occurred.
DISCUSSION

The asymptomatic, symmetric, erythematous, psoriasiform papules and plaques on the pinnae in this young dog showed similarities with the lichenoid psoriasiform dermatosis described in English Springer Spaniels. The lichenoid interface dermatitis seen on histopathology in this case can also be seen with various autoimmune disorders, epitheliotrophic lymphoma, toxic epidermal necrolysis, idiopathic lichenoid dermatosis (Scott, 1984; Scott, 1986), lichenoid keratoses (Anderson et al., 1989) and mucocutaneous pyoderma (Ihrke et al., 1995). The psoriasiform epidermal hyperplasia and lichenoid dermatitis were identical to those found in psoriasiform lichenoid dermatitis in Springer Spaniels. However, intraepidermal microabscesses and Munro’s microabscesses were not present on histopathology. Four cases of lichenoid psoriasiform dermatosis in English Springer Spaniels treated with cephalixin showed an excellent response with complete resolution of lesions (Burrows et al., 1994). It was proposed that affected Springer Spaniels develop a distinct and probably genetically programmed response to a superficial staphylococcal infection (Burrows et al., 1994). A similar lichenoid tissue reaction in response to a staphylococcal infection was suspected in this case. Psoriasiform lichenoid dermatosis has been described in other breeds. Werner (2003) described three dogs of different breeds treated with microemulsified cyclosporine A that developed an antibiotic-responsive psoriasiform lichenoid dermatitis. A staphylococcal infection was suspected and all three cases responded to antibiotic therapy. Studies in human psoriasis have shown the potential of bacterial superantigens to trigger psoriasiform dermatitis (Boehncke et al., 1997). In our case, the rapid resolution of the skin lesions during antibiotic therapy would be more consistent with staphylococcal infection than with spontaneous resolution of the lesions.

This report is of interest because it shows that other breeds can be affected by this condition. It is important to recognize psoriasiform lichenoid-like dermatosis as a clinical and histopathological reaction pattern, not as a definitive diagnosis. The search for trigger factors, such as the atypical staphylococcal infection in this case, is essential for understanding the etiology and enabling investigation of the pathogenesis.

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REFERENCES