Case Report

A Case Report of Acanthosis nigricans in a Male Terrier

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Objective: Acanthosis nigricans is a skin disease that presents in the form of increased skin thickness and hyper segmentation, especially in armpits and groin. Methods: An eighteen-month-old male terrier with itchiness and skin color change in armpits and groin was referred to the Small Animal Teaching Hospital of the Faculty of Veterinary Medicine, University of Tehran. The dog case history showed incorrect food regime as well. Clinical examination showed increased skin thickness and hyper pigmentation in mentioned body areas. Hematology and biochemistry tests were unremarkable. Results: Based on the clinical symptoms and paraclinical examinations, atopic Acanthosis nigricans was diagnosed. Treatment was focused on corticosteroid therapy and diet change. The clinical symptoms were improved after a few days. Conclusions: To treat the disease successfully, the main reason should be detected and resolved. The case history is very important in affected dogs.

INTRODUCTION

Acanthosis nigricans is a clinical reaction that associated with alopecia, elephantiasis, hyperpigmentation and increased skin thickness in armpits and groin (Stokking and Campbell, 2003; Phiske, 2014; Schwartz, 1994). Characteristic symptoms in dogs include skin color change and increased skin thickness. Although Acanthosis nigricans cannot clinically be distinguished by itself, the pathogenesis can weakly be recognized by the veterinarians (Groos et al. 1993). Clinical symptoms are results of inflammation and dermatitis, and occur in different forms. The inflammation occurs in primary (idiopathic) or secondary form (Roy et al. 2012; Groos et al. 1993; Hernandez-Perez, 1984).

The primary form of Acanthosis nigricans is a very rare disease. This hereditary form is only seen in Dachshunds and is considered as a skin genetic implication. Clinical symptoms in this form are usually seen in young dogs (Puri, 2011). The secondary form of acanthosis nigricans is more common in dogs and occurs in any breeds or ages. The risk factors include organ deformation, friction caused by overweight, contact disorders, hormone imbalance such as hypothyroidism, Cushing syndrome, sexual hormone disorders, food hypersensitivity, atopy and contact allergies. Skin itching in armpits and inguinal region is correlated with atopy and food allergies.

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Contact dermatitis and skin infection such as staphylococcal pyoderma and *malassezia* skin inflammation may be present. Asymmetric pigmentation and/or elephantiasis in armpits and perinea can be seen. Erythematous reaction often presents in the borders of lesion. This secondary bacterial infection or fungal pyoderma sign can be seen in the ventral surface of neck, groin, abdomen, perinea and periorbital areas and is associated with itching. Clinical diagnosis of Acanthosis nigricans is difficult. Underlying reasons of itching in species other than Dachshunds must be investigated in physical examinations carefully. In this paper, Acanthosis nigricans in a mature male terrier is reported (Puri, 2011; Groos et al. 1993).

**CASE REPORT**

An eighteen-month-old male terrier with itching and skin color change in armpits and groin was referred to the Small Animal Teaching Hospital of the Faculty of Veterinary Medicine, University of Tehran. The dog case history showed permanent skin itchiness and incorrect food regime over the past months. Clinical examination showed hyperpigmentation and increased skin thickness in mentioned body areas (Figure 1). Clinical symptoms included asymmetric elephantiasis in armpits and perinea, cutaneous erythematous reaction in borders of the lesions and itching. Clinical examination showed the good general health condition of the dog. Hematology and biochemistry tests were unremarkable. The secondary form of Acanthosis nigricans was diagnosed based on the clinical symptoms. However the primary form of Acanthosis nigricans cannot be treated; the secondary form shows a better response to medicine. The secondary forms usually respond to shampoo therapy and topical glucocorticoids such as betamethasone ointment. Systemic treatment is used when the lesions develop. Following a systemic treatment, vitamin E or a combination of vitamin E and general glucocorticoids must be used for weeks or, in some cases, for months. Antimicrobial therapy is a common treatment in the secondary form. In the current case, Treatment was focused on corticosteroid therapy and diet change. The clinical symptoms were improved after a few days. Obvious decrease of hyperpigmentation can be seen in Figure 2. Lesions usually are cleared up in secondary forms. Cephalexin, itraconazole or ketoconazole can be prescribed if the bacterial infection or fungal pyoderma is not treated completely. Antimicrobial therapy and anti-seborrhea shampoos are appropriate treatments in diagnosed dogs.

**DISCUSSION**

Although Acanthosis nigricans is told to be a polygenic autosomal recessive disorder, it has not already been proven as a hereditary disease (Puri, 2011). To treat the disease successfully, the main reason should be detected and resolved. Although corticosteroids help to reduce the skin inflammation, vitamin E can be useful in some cases as well (Kapoor, 2010; Higgins et al. 2008; Schwartz, 1994; Moradi et al. 2015). The case history is very important in affected dogs. Acanthosis nigricans is not a zoonotic disease.

**REFERENCES**


