

RHABDITIC DERMATITIS (DERMATITIS RHABDOSA) IN A DOG

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SUMMARY

Skin disease in dogs due to bacteria, fungi and virus has been frequently diagnosed at Universiti Putra Malaysia. However, a case on rhabditic dermatitis has never been diagnosed previously. This paper describes the gross and histopathologic findings of a skin condition in a stray dog most probably caused by *Pelodera strongyloides*. The dog showed severe erythematous alopecic lesions at the feet, legs, lower abdomen and chest with multiple papules and scales. There were moderate degeneration of collagen, pyogranulomatous perifolliculitis with the presence of a parthogenetic female nematode measuring approximately 600µm in length within the hair follicle.

Keywords: Dermatitis, dogs, *Pelodera strongyloides*

INTRODUCTION

Despite being the most common problem encountered in small animal practice (Muller and Kirk, 1995), the diagnosis and treatment of skin disease has always been a major problem (Lloyd, 1985). The diagnosis is usually made by recognising the gross lesion along with other ancillary tests. However, skin biopsy is regarded as a last resort in the investigation of dermatologic disorders (Dunstan, 1990). This paper reports a case of rhabditic dermatitis in a dog diagnosed by histopathology.

CASE HISTORY

This is a case involving a two-year-old male stray dog. The dog was stationed at the Pusat Kurungan Haiwan, Dewan Bandaraya Kuala Lumpur, Setapak and was part of a survey carried out to assess the dermatologic patterns of canine skin diseases. The dog was anaesthetised with pentobarbitone (Nembutal) at the rate of 30 mg/kg before three skin biopsies were taken from the legs, abdomen and chest using a 6 mm biopsy punch. The biopsy samples were then immediately fixed in 10% buffered formalin and processed for histological examinations.

RESULTS

The dog was presented with severe erythematous alopecic lesions at the feet, legs, lower abdomen and chest (Fig. 1). The lesions also comprised of multiple papules and scales. Histologically, there were moderate degeneration of collagen, pyogranulomatous perifolliculitis and strikingly, the presence of a

parthogenetic female nematode measuring approximately 600µm in length within the hair follicle (Fig. 2). This nematode resembled that of a *Pelodera strongyloides* species. Vasculitis was also observed at the upper dermal area.



Fig. 1. Photograph of the dog showing areas of erythematous alopecia on the feet, legs, abdomen and chest

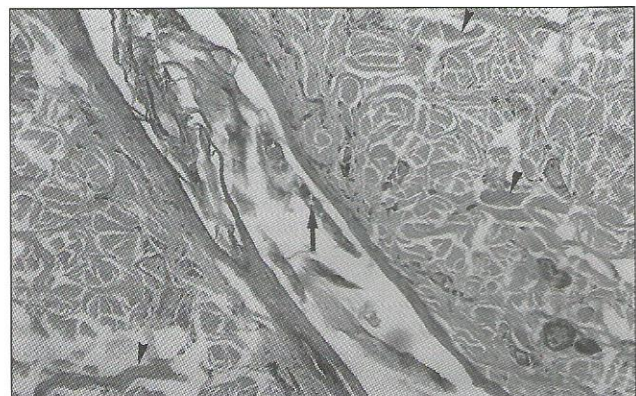


Fig. 2. Photomicrograph of the skin depicting the worm (arrow) with evidence of collagen degeneration. HE x450

DISCUSSION

The histologic finding of pyogranulomatous perifolliculitis and the parthenogenetic female within the hair follicle is very diagnostic of *Pelodera strongyloides* dermatitis. The history of pruritis and contaminated bedding together with skin scraping or biopsy (as in the case presented here) should be diagnostic (Muller and Kirk, 1995). However, differential diagnostic possibilities include hookworm dermatitis, dirofilariasis and strongyloidiasis, folliculitis and contact dermatitis. Since this was part of a survey and the dog was a stray, a complete history could not be obtained.

This is the first published report of rhabditic dermatitis in Malaysia. The absence of such reports in this country could have been due to the lack or absence of the use of histopathology in diagnosing skin diseases. It should be emphasised that although this disease is easily treated, a misinterpretation may lead to an ineffective treatment.

The larvae of this free-living nematode may invade the skin of dogs that are in contact with filthy soil or bedding (Soulsby, 1982). Since the dog reported in this paper is a stray, the habitat is usually grimy and possibly full of free-living larvae. Furthermore, unkempt condition predisposes the skin to infection and thus allowing easy access of the larva into the skin. The distribution of lesions of *Pelodera* dermatitis involves areas that are in contact with the ground (Horton, 1980;

Bordeaux, 1984). In the case reported here, lesions were found on the feet, legs, abdomen and chest, areas that are constantly in contact with the ground. Removal and destruction of bedding and bathing the dog with parasiticide is usually very effective (Bordeaux, 1984). Supportive therapy with corticosteroid and antibiotics to relieve pruritis and prevent secondary infection respectively, may be instituted.

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RINGKASAN

DERMATITIS RHABDITIS (DERMATITIS RHABDOSIS) PADA SEEKOR ANJING

Penyakit kulit pada anjing disebabkan oleh bakteria, fungus dan virus kerap didiagnosis di Universiti Putra Malaysia. Bagaimanapun, kes dermatitis rhabditis belum pernah didiagnosis sebelum ini. Kertas ini menghuraikan penemuan kasar dan histopatologi pada keadaan kulit seekor anjing terbuang yang mungkin disebabkan oleh *Pelodera strongyloides*. Anjing ini menunjukkan lesi alopesia eritema teruk pada tapak kaki, abdomen bawah dan dada dengan berbilang papul dan keruping. Penyahajaan kolagen sederhana, perifolikulitis piogranuloma dengan kewujudan nematod betina partogenetik berukuran lebih kurang 600µm panjang berlaku dalam folikel rambut.