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The epidemiology and control of camel dermatophilosis


La dermatophilose du chameau n’a été décrite que récemment. Elle semble néanmoins plus répandue qu’on ne le croyait. Au Kenya, elle a été trouvée en général dans les régions semi-arides d’élevage du chameau dans les districts de Samburu et de Laikipia, mais n’a pas encore été mise en évidence dans les régions arides du district de Turkana. Lors d’une prospection de tiques sur 200 chameaux, aucune tique Amblyomma variegatum n’a été trouvée bien que de nombreuses autres tiques étaient présentes. On soupçonne A. variegatum de transmettre la dermatophilose à plusieurs animaux domestiques. La seule méthode de lutte contre la dermatophilose au Kenya est actuellement appliquée dans une ferme commerciale, où les chameaux sont régulièrement lavés avec une solution d’alun potassique à 1 p. 100. Les chameaux ont montré une amélioration progressive. Récemment, environ 50 chameaux importés du Pakistan ont été affectés par une infection cutanée sévère, très similaire à la dermatophilose. Tous les chameaux importés adultes ont été atteints, mais non les veaux. Etant donné qu’on n’a pas pu isoler de bactéries de ces chameaux, on pense que l’affection a été causée par une déficience en vitamine.

Mots clés : Dromadaire - Dermatophilose - Dermatophilus congolensis - Epidermologie - Tique - Amblyomma variegatum - Kenya.

INTRODUCTION

Camels are reared in the arid and semi-arid areas of Kenya which constitute eighty per cent of the total land surface and where pastoralists derive their livelihood. The camels are particularly valuable as they survive and even thrive during the dry season while other animals die in great numbers (2). Camel dermatophilosis is a skin disease of camels recently described in one commercial farm, the Ol Maisor farm in Laikipia District in the semi-arid areas of Kenya (4).

Dermatophilosis in the bovine is described to be more prevalent in free-ranging animals rather than in well managed herds (7, 11). Bovine dermatophilosis has also been strongly associated with the tropical bont tick, Amblyomma variegatum (3, 8). A similar relationship has been described for goats with a severe skin infection (9). Attempts at control of dermatophilosis have been performed by dipping of cows in acaricide (8) or dusting of sheep with aluminium potassium sulphate (5).

In this study therefore, the possibility of camel dermatophilosis being present and probably more prevalent in the free-ranging camels in the semi-arid areas was examined. The presence and distribution of ticks on 200 camels in the free-ranging camels was compared to similar camels at the Ol Maisor farm. Some very severe skin lesions which developed on camels imported from Pakistan to the Ol Maisor farm were examined and the control method practised at the farm against camel dermatophilosis was studied.

MATERIALS AND METHODS

Two hundred camels kept by pastoralists in herds ranging from 5-15 camels per herd were examined. These camels are reared freely in the Samburu district which is semi arid receiving about 500 mm of rainfall annually. A similar examination of 200 camels at the Ol Maisor farm was performed. From the Pakistan camels, 30 samples were obtained from the sick camels. Skin scabs were obtained from suspicious skin lesions and processed as described before (4) and then examined for the presence of Dermatophilus congolensis.

Ticks were obtained from the two hundred camels reared by pastoralists and from the two hundred camels in the commercial farm. This was performed in March in the rainy season and repeated in August in the dry season. The site of attachment was noted and the ticks identified as described by Hoogstraal (6).

The application of 1% potassium aluminium sulphate was assessed after a period of six months on eight camels which were severely affected. Four camels which were not treated were used as controls. Four sites on each camel were marked and their diameter in size and wool regeneration followed monthly.

RESULTS

Dermatophilosis was found in three pastoral households affecting twenty seven camels. Camels of different age groups were affected and the degree of skin involvement