Case Report of Mange and Ringworm in Sheep in the Libyan Jamahiriya

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ABSTRACT

Dermal infection of the head and neck region of members of a flock of local sheep at Victory Farm, Tripoli was the result of infection with the mite *Sarcoptes scabiei* and two species of *Trichophyton*. Infected animals became emaciated and weak and economic losses occurred. These species are zoonotic and can infect man, posing a public health threat. *Psoroptes ovis* was also isolated from the fleece of sheep. The recommended drug Asuntol to treat the mite infestations was not available and treatment with Gammetox was ineffective, demonstrating resistance to this drug.

INTRODUCTION

Ectoparasitic infections of domestic animals constitute a serious problem in the Socialist People's Libyan Arab Jamahiriya. In order to effectively treat infected animals it is necessary to identify all the disease organisms present. Immediate identification and treatment of parasitic diseases in animals prevents economic loss and, when zoonotic species are involved, there is the additional necessity of preventing a public health problem.

In the case reported here, three zoonotic species were involved, namely the mite *Sarcoptes scabei* and two *Trichophyton* species which are causative agents of ringworm.

CASE REPORT

In April 1979 an outbreak of a dermatological infection in local sheep at Victory Farm, Tripoli was investigated. At this farm 7,500 local sheep (Barbary fat tail) are housed on concrete slatted floors with access to outside dirt pens.

A number of animals housed in various pens had developed lesions around the muzzle and eyes. The lesions showed alopoecia and were heavily crusted. Ringworm was suspected and local application of tincture of iodine caused some improvement but in some animals the lesions had spread to encompass the entire head and neck (Fig. 1). The sheep were listless and emaciated and were isolated from the flock.

Microscopic examination of surface material from the lesions revealed macroconidia of two species of *Trichophyton* (Fig. 2) Becker and Tiefenback (1) and Klatt (4) successfully used a solution of 0.5–1.0% benzuldazic acid (Defungit, Hoechst) to treat cattle ringworm. A limited supply of this preparation was available and used to treat 12 sheep. Examination of deep skin scrapings taken from the edges of lesions on the 12 sheep revealed the mite *Sarcoptes scabiei var. ovis* (Fig. 3). The mite *Psoroptes ovis*

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Fig. 1. Head of sheep showing raised areas of dry, thick encrustations around the muzzle, eyes and ears. The wool on the neck is dry and falling off.

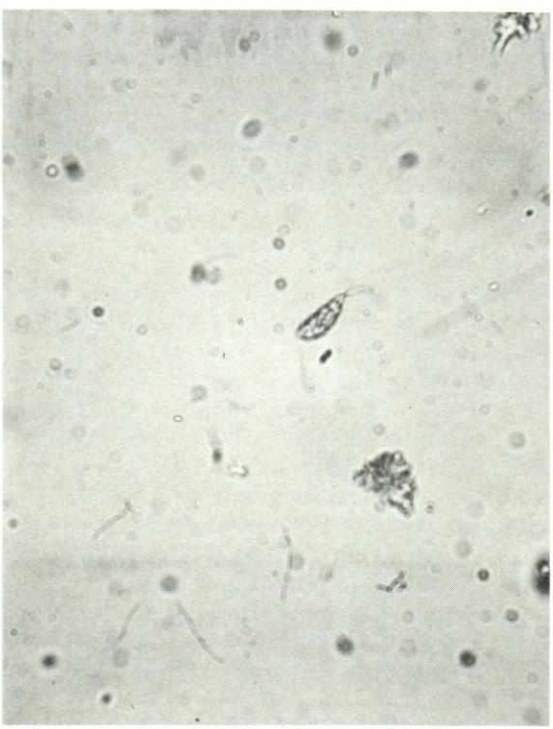

Fig. 2. Macroconidia of *Tricophyton* spp. in a skin scraping. Magnification ×210.

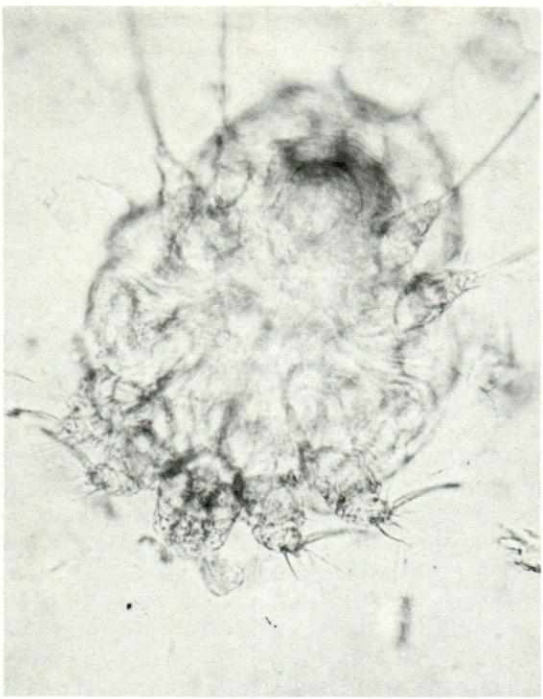

Fig. 3. *Sarcoptes scabiei* female mite recovered in skin scrapings from the head region. Magnification ×210.

Fig. 4. *Psoroptes ovis*. Larval stage recovered from the fleeced area of the body. Magnification ×210.

was also isolated from the fleece (Fig. 4). Leibische, Flasshoff, Ahlert, Lindfield and Wiechel (5) and Mostaghni and Ahmadnezhad (6) successfully treated mite infestations of cattle and sheep with a 16% solution of cuamophos (Asuntol, Bayer). This drug was therefore recommended for treatment of these infected animals.

RESULTS AND DISCUSSION

Few reports exist of ringworm in sheep, Catanei (2,3), Mostahgani *et al.* (6), Roberts and Keep (7) and Verbreuseghm (8), and as a result veterinary textbooks refer to ringworm as being of little importance in sheep. Both sarcoptic and psoroptic mange can lead to large economic losses. In sheep *Sarcoptes* is confined to the head and neck region and is uncommon in heavily woolled animals. *Psoroptes* is found over the rest of the body and leads to aloepoecia and wool damage. *Psoroptes* is found in about 80% of the countries of the world.

In the case reported here there was a serious clinical condition as a result of two infections not normally common in sheep occurring together. The lesions on the head were formed by the primary infection of the burrowing mite *Sarcoptes* facilitating infection with the ringworm species. Detailed examination of the disease organisms was necessary to give a correct diagnosis and institute treatment. The ringworm infection responded to treatment with Defungit. However Gammetox was substituted for Asuntol to treat the mite infestation as the latter was not available. The infection did not respond to this treatment and the sheep were slaughtered.

The failure of Gammetox to eliminate the mite infection illustrates resistance to this drug which has been overused against ectoparasites in Libya. It will be necessary to fully evaluate the degree of resistance of ectoparasitic species to Gammetox throughout Libya and compare its activity with that of other antiparasitic agents. The results will enable the veterinarian to confidently use various drugs.

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تقرير حول انتشار مرض القوباء الحلقية (رنك ورم) فى الأغنام بالجماهيرية

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بعد انتشار بعض الأمراض الجلدية فى مزرعة النصر بتاجوراء بين الأغنام وكلها محلية . اكتشف معمليا وجود حلمة (ساركوبتس سكيبى) الذى يسبب الجرب فى الأغنام . وعثر على نوعين من الفطور الشعرية المتفرعه التى تسبب مرض القوباء الحلقيه (رنك ورم) علما بأنه من النادر اصابة الأغنام بهذا المرض حيث تصيب أكثر حيوانات المزرعة علما بأن المرض هذا يشكل خطورة على الصحة العامة . كما عثر على حلمه (سروبتس أوفسى) فى أصواف الأغنام والتى تسبب خسارة كبيرة لنوعية وكمية الأصواف . هذا وقد لوحظ عدم منفعة مادة (كامتوكسى) للعلاج فى الحالات المذكورة .