PRELIMINARY REPORT ON THE EFFICACY OF SCABICUR PREPARATION ON THE MANAGEMENT AND CONTROL OF SCABIES AND RELATED MALADIES

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Introduction

Sarcoptic mange is a contagious disease of animals and man caused by the mite *Sarcoptic scabiei*. The mites are obligate parasites which could cause the death of their hosts, or reduce their growth rate by as much as 48.2% (Meleney, 1985). The severity of clinical manifestation is dependent on the reproductive and feeding habit of the mite and the degree of devastation of the skin of the host.

The parasite, Sarcoptic scabiei piercing the skin to suck the lymph of the host may also feed on the young epidermal cells. Their activities produce a marked irritation which causes intense itching. The exudates coagulate and form crusts on the surface of the skin which is further scarified by excessive keratinization and proliferation of connective tissue. This results in the skin becoming thickened and wrinkled with concomitant loss of hair (Mellanby, 1944). The encrusted lesions contain myriads of mites.

According to Olubunmi and Etuk, (1985) sarcoptic mange has become one of the commonest ectoparasitic diseases of domestic animals with livestock farmers applying various kinds of drugs for the treatment and control of the disease. Such drugs include coumaphos, asuntol, lindane, toxaphane, chlordane, benzene hexachloride (BHC), amitraz, alugan, chlorinated hydrocarbons and ivermectin. Many of these drugs are toxic, expensive and sometimes scarce. It has therefore become necessary to develop local alternatives that will be affordable, available and relatively less toxic.

Scabicur, a preparation formulated by the Parasitology department of the National Veterinary Research Institute, Vom Nigeria for the management and control of scabies was used in these preliminary therapeutic studies.

CASE REPORTS

Case 1

History

An adult West African dwarf goat belonging to a family living in the vicinity of the National Veterinary Research Institute, Vom had generalized dermatitis, alopecia and encrustation of the skin (Appendix A; Plate c) was presented to the Parasitology Research laboratory. The animal had clinical history of intense pruritis, restlessness and loss of appetite. Local herbs had been applied copiously, by the owners without remedy.

Laboratory Examination

Skin scraping was taken and digested in 10% potassium hydroxide (KOH) for about 5 minutes. A wet mount was put on a pretreated clean glass slide, covered with cover slip and examined with light microscope at 10x magnification. Mites with two pairs of legs typical of *Sarcoptic scabiei* were observed (Appendix A; Plate b).

Differential Diagnosis
Other conditions that may present similar signs include allergies, pustular dermatitis [Contagious ecthyma], ring worm and photosensitization.

Diagnosis
Scabies (Sarcoptic mange)

Treatment
The goat was covered with Scabicur lotion using soft brush thrice daily for 7 consecutive days. Positive response with resolution of lesions within 7 days of continuous application was obtained (Appendix A; Plate d)

Case 2

History
A three year old boy from Jos South Local Government area of Plateau State was presented with papular dermatitis of the face, rupture of some of the papules and encrustation (Appendix B; Plate e). There was intense pruritis. He had been treated topically with oxytetracycline/Ampicillin with no improvement.

Case3

History
A lady from Jos South Local Government Area of Plateau State with encrustation and purulent discharges on her face and neck region (Appendix B; Plate i) came to the Parasitology laboratory for examination. Previous treatment received by her included chlorpromazine, Ampicillin /Cloxacillin mixture, ascorbic acid and topical application of medicated soap (Delta®). She reported a lack of improvement in the condition.

Case 4

History
A 15-year-old secondary school girl from Bauchi State was presented with crusty lesions from the lower parts of her face especially around the chin (Appendix B; Plate g). She had had contact with classmates with similar lesions. Treatment earlier received by her included an anti-pruritic agent, Biocoten ® topically. Response to the treatment was said to be insignificant.

Diagnosis (Cases 2-4)
Skin scrapings did not show presence of mites, *Dermatophilus congolensis*, nor mycotic agents. The exact causes of the infections were not determined.

Treatment

Cases 2-4
The affected area of the head of the patient in case 2 was washed with Scabicur soap followed by topical application of the lotion thrice daily for 14 consecutive days. In case 3, both the soap and the lotion were applied as in case 2 above for 14 days.

The affected portion of the face of the patient in case 4 was washed with Scabicur soap followed by dusting with Scabicur powder thrice daily for 7 days.

Results
Cases 2-4
All the human cases (i.e. 2-4) showed very positive responses, with resolution of the lesions between 7 and 14 days depending on their severity (Appendix B; f, h, j). The response was prompt and without side

effects and patients did not report any relapse.

Discussion

Scabicur, shown to be effective in the treatment of sarcoptic mange of goat in this study is an interesting development. This is because *Sarcoptic* mange is a rampant and economic parasitic disease of small ruminants, particularly goats, in Nigeria. Drugs currently available in the market, especially ivermectin, doramectin and moxidectin are very expensive and unaffordable by the peasant farmers who own about 80% of the small ruminant population of Nigeria. These drugs also require expert handling by Veterinary personnel. Thus, the introduction of a locally available, easy to apply, effective and less expensive drugs like the Scabicur used in this study will be appreciated by the local farmers.

More clinical trials in other species are, however, required while standardization and registration of the preparation is highly recommended.

From the positive responses obtained in the few human cases above, Scabicur has been shown to be efficacious against scabies-like conditions in man. The preparation thus has a great future in the control and management of scabies-like maladies in humans. However, determination of the aetiologies of such conditions is necessary and recommended.

References

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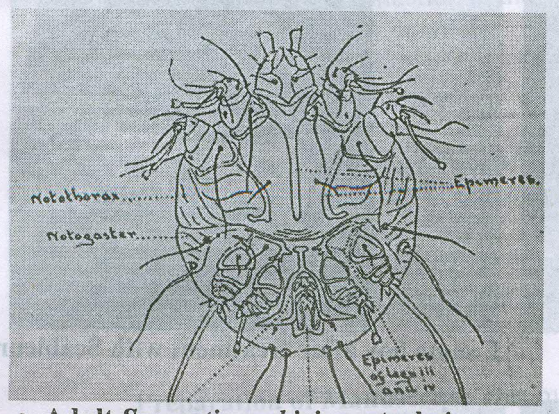
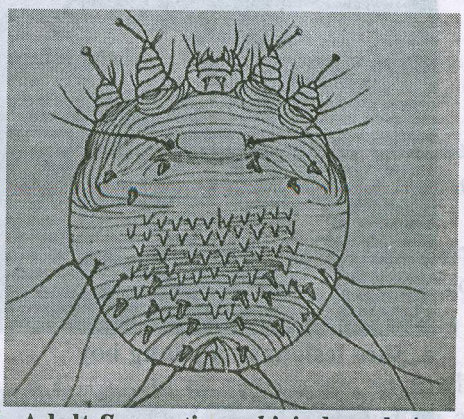
3. Olubunmi, P.A. and Etuk, I.F. (1985).The efficacy of Extracts of *Heliotropium indicum* Linn, for the treatment of *Sarcoptic* Mange in Pigs. Tropical Veterinarian 13 (3&4):103-108

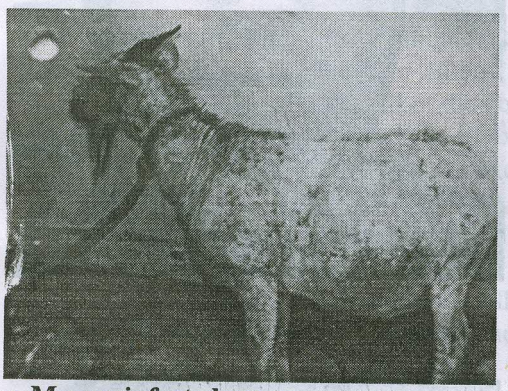
APPENDIX A



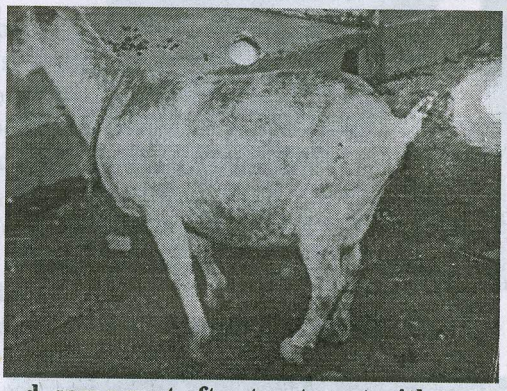
a. Adult *Sarcoptic scabiei;* ventral view



b. Adult *Sarcoptic scabiei;* dorsal view



c. Mange-infected goat



d. same goat after treatment with Scabicur

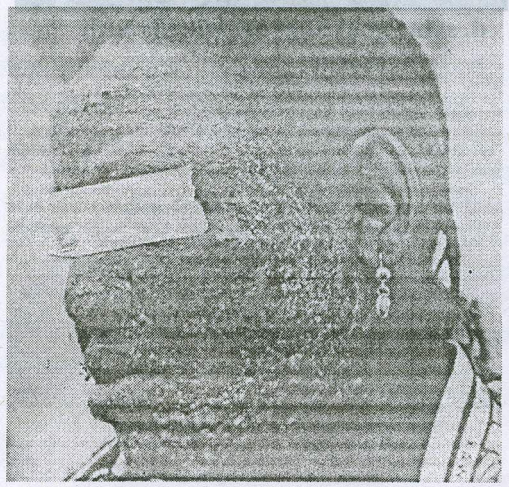
APPENDIX B

e. Skin lesions in a young boy

f. same boy after treatment with Scabicur

g. Skin lesions in a teenage girl

h. same girl after treatment with Scabicur



i. Young woman with skin lesions

j. same woman after treatment with Scabicur

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1. Bababunmi, E. A. (1980). Toxicology in the tropics. Taylor and Francis, London. 1st Edn. pp. 93 – 94
2. Corbel, M. J. and Morgan, W. J. B. (1984). Genus Brucella In: Bergey's manual of systematic Bacteriology, Kreig, N. R. and Holt, J. G. (Eds). Williams and Wilkins, Baltimore 2nd Edn. pp. 377 – 388.
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