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REVIEW ON THE STUDY OF THE SKIN DISEASES IN ANIMALS COMMUNICABLE TO MAN

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Introduction

RESEARCHES carried out by different worker in various parts of the world have indicated that many skin diseases of animals may be communicated to man. This fact is of importance to the workers who have to handle animals and to those who have animals as domestic pets. During the recent years some investigations have been carried out on this subject in India and abroad but systematic study has not been done. A review of the work is presented in this paper.

The diseases are considered under the following main headings:

A. Fungus diseases.

B. Animal parasitic diseases.

C. Virus diseases.

A. *Fungus diseases*

Ringworm is by far the most important animal skin disease transmissible to man. About 27 per cent of all dermatophytosis are due to species which are parasites of the lower animals and though the treatment of this kind of infection is usually simpler than that caused by anthropophilic species, the control of this infection in animals presents a special problem which calls for the co-operation of the veterinary profession. *Microsporum lanosum* is more common than *M. audouini* infection from animal sources, the infection derived from animals causing ringworm of the scalp becomes attenuated by child to child transmission and it dies out after about 4–6 transfers in the series. Renewal of the infection, from an animal host is therefore necessary for the continued propagation of the disease in children and the existence of an animal reservoir of the disease is responsible for the persistence of ingworm of the scalp in children.

The animal ringworm in man produces: (*a*) Rings which may be scaly, vesicular or pustular. Sometimes as in cat ringworm there are concentric rings.

(*b*) Patches or plaques which have a rounded or festooned outline. These plaques may be scaly or show vesicles and pustulations. The most severe lesions are kerion of the scalp, characterized by raised, boggy, phlegmonous swelling with numerous minute perifollicular abscesses. From the centre of these abscesses loose hairs can be easily extracted. In the beard region, the suppurative lesions begin with a perifollicular abscess. The lesions may be isolated but they often form large masses. The scaly type of beard ringworm is usually due to endothrix variety of trichophyton fungi but in some cases the fungus is of animal origin and may form flat plaques.

(*c*) Suppurative nail lesions occasionally occur but the majority of nail infection is caused by endothrix trichophyton variety or epidermophyton.

It has been observed that certain fungus diseases of man are communicated from the following animals, *viz*, cattle, cats, dogs, mice, sheep, pigs, asses, horses, and fowls.

(A) *Cattle ringworm*

This disease occurs commonly in the spring after the animals have spent a long time in the field. In cattle the infection is more common lesions. There are several varieties each peculiar to a particular species of animal but in their main anatomical characters they closely resemble each other and Sarcoptes scabiei of man. Although they are usually confined to a particular species of animal, the Sarcoptes of one species may be transmissible to another species, *e.g.* horse sarcoptes to cat or man, etc. It is not uncommon to find Sarcoptes equi and Sarcoptes canis infecting the human subjects. Exposed surfaces especially those parts which come in contact with the infected animals are affected.

Scabies from animal sources causes too much irritation that persists even after the disappearance of papular lesions. It takes a longer time to cure the condition with the usual

methods of treatment, as practised in the treatment of human scabies.

(*ii*) *Demodecidæ*—This is not highly contagious like sarcoptic mange, but runs a chronic course. It is a known fact that each species of animal has its own particular variety of demodex. In dogs it produces a type of disease which became serious, as it causes intensive ulceration of the skin with loss of hair. Demodex infection in man often has superimposed impetigo. This impetigo in man is usually superficial and some of the cases are transmitted from animals. The lesions are ringed and resemble a circinate impetigo. It is generally found in children but rarely in adult person.

Any bland ointment will clear it in a few days in man but in animals the results of treatment is unsatisfactory.

C. *Virus diseases*

(*i*) *Molluscum contagiosum*—this is found in chicken, pigeon, sparrow, fowl and other birds. To the naked eye and microscopically the resemblance is extraordinarily the same. It has been suggested that the disease is identical in bird and man and may be communicable to man from birds directly or indirectly. Successful inoculations of Molluscum contagiosum virus from birds to human subjects have been made.

(*ii*) Infective warts can be acquired by contact with animals, dogs and cows being the most common sources.

(*iii*) Milker's node—Handmilking may result in infection of the hands and fingers especially in milkmen in the form of bullous eruption about the size of a large pea which involutes in 6–12 weeks. The virus bears a close resemblance to that of vaccinia but laboratory experiments seem to demonstrate their separate entity. Treatment is symptomatic.

(*iv*) Orf (Pustular dermatitis)—This contagious disease of sheep may be transmitted to shepherds. The lesions are usually seen on the fingers, each starting as a dark red papule which attains the size of a four-anna piece. The papule is at first hard and painless; it then develops a central umbilication. Fluid accumulates in the centre which rapidly becomes pustular and pain is now apparent. Gradually granulation tisssue forms so that the appearance of the lesion suggests that of granuloma pyogenicum.

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Other Original Articles

"CASE NOTES OF SCABIES IN A FAMILY TRANSMITTED FROM GOATS"

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SCABIES is one of the common skin diseases in hospital practice but it is no respector of rich or poor. Mikhail and Falk (1952) reported that animal scabies is fairly common; the usual sources are camels, cats and cattle. Sequeira (1925) also described that scabies of goat and camel not infrequently attack men. Thomson (Mitchell-Heggs, 1950) who has worked on the animal skin diseases communi-