Dermatology for Nurses

By

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Animal Parasites

Animal parasites cause cutaneous affections quite frequently in tropical countries like India. They are usually the product of unhygienic environments, so occur mainly in areas and communities where crowding, filth and poverty prevail. Lousiness in hospital patients, bites of bed bugs and mosquitoes often come to the attention of the nurses sooner than that of the doctor. Since animal parasites can carry organisms and may be responsible for the spread of such systemic diseases as typhus (fleas, ticks and lice); plague (fleas) etc., field nurses and health visitors must be fully informed about them. In the following pages, I shall endeavour to acquaint you with the more common parasites *i.e.*, pediculi, scabies, fleas, bed bugs, ticks and other mites.

Pediculosis or Lice.

The Indian name is "*Juan*". There are three types of lice depending upon the body area affected; head, body and pubis.

Pediculosis of the head.

The female louse is about 2 mm. long and half as broad; the male is slightly smaller. They are greyish in colour. Male and female copulate and produce ova which lie in sacs (nits) which are attached to hair by bands. Ova mature into adult lice in about 2 weeks.

Children and women are more frequently affected. The back and sides of the scalp are the sites of choice. Infection is transmitted through common combs and head dress. Pediculosis, as a rule, is an index of poor hygiene. Lice traumatise the skin in search of food; taumata produce irritation with resultant scratching, scratch marks, and may be secondary pyodermia. Persistent secondary infection produces regional lymphadenitis. On examination, living lice and nits are seen. The latter are firmly attached to the hair, but can be moved along it towards the free end. Persistent impetigo and itching of the scalp must make the nurse think and look for pediculi.

There are several treatments recommended but the ones commonly used are :

1. D. D. T. emulsion—5-10 p.c. Apply about a tablespoonful of it all over the scalp by parting the hair and rubbing thoroughly. Hair is combed and washed after 24 hours. This can be repeated 2-3 times till the infection is completely eradicated.

2. Lorexane (I.C.I.). It is a very pleasant lotion to use. One tablespoonful of it is needed for one application. It is applied in the same way as the D.D.T. emulsion with the only difference that the hair is washed at the end of 7 days and the application is not to be repeated for a week.

Bed clothes, head dress and combs must be sterilised to prevent reinfection and transmission to others. Secondary complications are treated in the usual manner.

Pediculosis of the Body.

It is caused by the body louse which is longer (about 3 mm. in length) than the head louse. Life cycle is about the same. Pediculi lodge themselves in the seams of the

underclothing, usually the vest. They prefer to lay their ova on the clothing rather than hair of the body. They attack the skin only in their search for food; these attacks produce minute hæmorrhages, crusted papules and scratch marks. Affection may be complicated by pyodermia, eczematisation and urtication. Pigmentation in chronic cases makes the integument look like that of a vagabond. Scapular regions and shoulders selectively abound in lesions. Young adults and old people are the ones commonly affected by this parasite. Pediculosis is common in mass migrations; at such times, the parasite can start epidemics of typhus and relapsing fever.

Treatment consists of sterilization of clothes by boiling or exposure to steam or a hot iron. D.D.T. 10 p.c. powder or liquid are the best for application to skin and clothing. Secondary lesions must be treated at the same time. If dermatitis ensues with D.D.T., its application must be stopped and soothing preparations like Calamine Lotion applied.

Pediculosis of the Pubis.

It is caused by stout pubic lice which may affect besides pubic regions, eyebrows and axillae. The life cycle of this louse is about the same as that of the head louse. Infection is transmitted through sexual intercourse or use of common bathing costumes, and lavatories. Clinical features are intense itching, scratch marks, nits on pubic hair and presence of moving lice. Treatment consists of shaving the pubic hair, rubbing in of D.D.T. powder, and afterwards the use of a mild soothing ointment such as Calamine Cream. Underclothing must be disinfected with D.D.T. or by boiling.

Scabies.

This is a contagious skin disease caused by a parasitic mite called Sarcoptes Scabeii. The female parasite is 400u x 300u in size, and grey in colour. It is just visible to the naked eye. The male is smaller and short lived. Life cycle from ovum to adult lasts about ten to fourteen days; it occurs in the burrows of infected skin, the impregnated female sarcoptes having burrowed her way into the horny layer of the epidermis. In these burrows, she lays her eggs which develop into larvae; the latter pierce the roof of the burrows, find shelter in the pores of the skin and quickly grow into adult parasites.

Main features of scabies are two:

1. Itching which is worse at night.
2. Burrows which are torturous, ½ to 1" in length, flesh coloured or darker.

Common sites of burrows are palms of hands and fingers, wrists, elbows, genitalia. Neck and face are not involved except in children.

Usually there are more than one case of scabies in a family; multiple cases of itching in a family are themselves a pointer to an infectious case. Besides burrows, scratch marks, secondary impetigo and folliculitis are usually seen in scabies as secondary features. In untreated cases, the disease may last for months.

Treatment of scabies is mainly specific destruction of the parasites with sulphur ointment or Benzyl Benzoas emulsion. There are several other scabicidal medicaments available in the market but it is as well to be thoroughly familiar with one, than to know a horde of them, insufficiently. For routine use and mass treatment, Benzyl Benzoate 25 p.c. emulsion is very useful; it is non-irritating compared to sulphur ointment. Instructions regarding its use are:

To take a hot bath at night and apply Benzyl Benzoate emulsion over the whole body except the head. Put on old clothes. Next evening, apply the emulsion again. 12 hours later *i.e.*, third morning, to take another bath and put on clean clothing. The