

SCABIES AND PEDICULOSIS PUBIS

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Introduction

Scabies and pediculosis pubis are common ectoparasites that have been known since the dawn of time. At first sight, it may seem unusual to classify scabies as a sexually transmitted disease, but the fact that it is transmitted through intimate contact shows that sexual relation plays an important role in its transmission.

It is true that scabies and pediculosis pubis do not lead to any genital complications that could cause an alteration in fertility, but all the same, the fact that these diseases can be transmitted through sexual contact presupposes that the subject is also vulnerable to other insidious STDs such as gonorrhoea and chlamydiae infection whose consequences are far more disastrous.

Scabies

Epidemiology

Scabies in its endemic form exists in several areas of the world sometimes it assume epidemic proportions.

The spread of scabies is facilitated by promiscuity and poor-hygiene living conditions, though the disease is not limited to poor communities.

It is caused by *Sarcoptes scabiei hominis* which is a variety of skin parasite strictly adapted to humans. It is transmitted essentially through inter-human contact though, infection may also result from contact with contaminated linen. For the disease to be contracted from an infected person, there must be intimate and prolonged contact.





When contact with an infected person occurs, the fertilized female mite is transmitted. This mite penetrates the epidermis, making a burrow through the stratum corneum. The parasite remains buried here throughout the duration of its life which may last about 30 days. Everyday, it lays eggs, prolonging the length of the burrow 0.5 to 5mm per day. The eggs hatch in 3 to 4 days producing larvae which regain the surface of the skin. These larvae develop into nymphae and then adult mites. Copulation occurs on the surface of the skin and female mites thus fertilized are once again ready to infest either the host himself or any other subject with whom he comes into contact.

Clinical features

The key symptom of scabies is pruritus. It is most felt at night. In the beginning, it is localized on the inter digital spaces of the fingers (fig. 9, next page) and the buttocks, then it spreads to other parts of the body (fig. 10, next page) sparing the head, the neck and the back. The disease is contracted by the patient's sexual partner, bed mate or family members.

Close examination reveals a sinuous lesion measuring a few millimetres long. It is this lesion, known as the scabetic burrow, which characterizes the disease. The scabetic burrow is the path travelled by the mite in the stratum corneum. The mite lodges in the swollen end of the burrow, while its eggs occupy the rest of the lesion.

Apart from these specific signs of scabies, there are other telltale signs such as pearl shaped vesicles, linear striae, excoriations resulting from scratching and, super-infected lesions (fig. 11, below).

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|  <p>Fig. 9 - Scabies: Interdigital lesions of the fingers with lichenification secondary to the scratching.</p> |  <p>Fig. 10 - Papular lesions of excoriated scabies located on the buttocks.</p> |
| <p>Fig. 9</p> | <p>Fig. 10</p> |
|  <p>Fig. 11 - Scabetic lesions on the penis with associated crusted lesions.</p> |  <p>Fig. 12 - Nodular scabies of the penis.</p> |
| <p>Fig. 11</p> | <p>Fig. 12</p> |

The localization of the lesions is very telling. They appear on the spaces between the fingers, the inner side of the wrists, the posterior and internal sides of the elbows, the anterior axillary folds, the belt region and the buttocks. A few peculiarities may be noted, namely that in women the lesions appear on the nipples and the areola of the breasts.

When scabies is contracted through sexual intercourse, it only differs from the ordinary scabies in that the lesions appear predominantly on the genital organs. The infection of the genitals is sometimes isolated, and in men, in particular, pruritic erythematous papules occur on the scrotum and the penis. This type is referred to as nodular scabies (fig. 12, above). The lesions here are due to hypersensitive reaction to the parasite or its excretions. In women, sexually contracted scabies is rarely characterized by inguinal lesions. Rather, the papules most often appear on the buttocks and in the peri-umbilical region.

Course and complications

Excoriations and striae resulting from intense scratching are covered by crusts and may become super-infected. The germs most often encountered in the super-infected lesions are aerobic bacteria, with a preponderance of *Staphylococcus aureus* followed by group A streptococci and *Pseudomonas aeruginosa* (1).

Sometimes, when treatment is not begun soon enough, the scabies may be overlaid by impetigo, ecthyma, cellulitis, lymphangitis and furunculosis, thereby complicating the original infection. In long standing infections or when occurring in immuno-compromized individuals the scabies may take the form of highly contagious crusted lesions (2). This crusted scabies is still referred to as Norwegian scabies.

Diagnosis

Diagnosis is essentially based on history of contacts with infected people and physical examination. However, some clinical forms may require biological confirmation, especially when the subjects are clean people with very discrete lesions.

Diagnosis is made by examining under the microscope specimens shaved of the stratum corneum bathed in an isotonic solution. These specimens are taken from the scabetic burrows or from recent scabious nodulars. The clinical diagnosis is confirmed when the examination reveals sarcoptes or their eggs.

Treatment

A few principles have to be followed:

- treatment should involve both the infected person and his/her sexual partner. Treatment may also concern other members of the family, especially infant in close contact with its infected mother.
- all parts of the body excluding the face should be treated.
- the bed and clothing used within the 48 hours preceding to the treatment should be disinfected.
- when scabies is sexually contracted, remember to look for associated asymptomatic STD.
- Therapeutic procedures
- Lindane 1%: The drug is applied for a 12-hour period for adults and for a 6-hour period for children. It is not recommended for pregnant or breast-feeding women and for children under two. Lindane is known to have a high toxic potential. Its toxicity is mainly neurological. Cases of resistance have been reported.
- Pyrethrine 5%: This drug is less toxic. It is applicable for 12 hour period during three consecutive days.
- Benzyl benzoate 10%: It is applied twice with an interval of 10 minutes. The drug should be left on the skin for 24 hours. This duration is reduced to 12 hours for pregnant women and infants.
- Crotamiton 10%: It is applied during two consecutive nights. The bath should be taken 24 hours after the last application.
- DDT or Clofenotane is not recommended because of its limited effectiveness.
- Ivermectin: If taken at a single dose of 200' Micro'g per kg. It appears to be very efficacious against scabies (4). Taken at a dose of 100' Micro'g per kg, the drug does not seem to differ in any significant way from benzyl benzoate 10% (5).

Pediculosis pubis

Pediculosis pubis is due to *Phthirus inguinalis*. It is transmitted when there is intimate contact. The adult louse is very sedentary and remains glued to the base the hair, sinking its head into the follicle. It is transmitted during sexual intercourse. According to Feldman, there is a 95 % chance of

contracting pediculosis pubis during a single sexual intercourse (6). However, the louse can also be transmitted through contaminated linen.

Besides infesting the pubic area, the parasite may stick to the eyelash the eyebrow, the hairs of the chest, ears and nose.

Clinical features

Pediculosis pubis is characterized by an intense pruritus. The lesions found in the pubic region are essentially linear streaks and excoriations. These lesions are susceptible to super infection and eczematization. At the abdomen, macular lesions may appear, having a diameter of less than 1 cm and bluish-grey pigmentation. Such lesions are exceptional nowadays and can be seen on light-skinned people.

Diagnosis

Diagnosis is often difficult, especially as the lice are not easily visible. Upon close examination, the nits may be found glued to the hair and the phthirius.

Treatment

A few principles should be borne in mind:

- the treatment involves the infested person and his/her sexual partner;
- the infested person should be tested for associated asymptomatic STD;
- the clothing and linen used 48 hours prior to the treatment should be disinfected;
- treatment is focused on the infested regions and the surrounding hairy areas.

Therapeutic procedures

- Lindane 1% lotion or cream: when applied, it is left on for 8 to 12 hours. The treatment is renewable on the 8th day. The shampoo version of the drug alone is inadequate. Lindane is not recommended for pregnant or breast-feeding women.
- Pyrethrine plus piperonyl butoxide: When applied, the drug is left on for a period ranging from 30 minutes to one night, depending on the galenical form of the product. The treatment is renewable on the 8th day.
- DDT or Clofenotane: This drug has been abandoned on account of the numerous cases of resistance.
- Malathion: It is active against parasites and nits. The drug is applied once and left on for 12 hours.

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