Lice

Lice is a very common ectoparasitic infestation of the scalp, body, or pubic hair. This infection can also involve other hair-bearing areas, such as eyebrows or eyelashes. There are three distinct varieties of lice. These are Pediculus humanus capitis (causes head lice), Pediculus humanus corporis (causes body lice), and Pthirus pubis (causes pubic lice). Clinical manifestations include pruritis, excoriations, and post-inflammatory hyperpigmentation. Louse-borne diseases include trench fever, which is caused by Bartonella quintana; epidemic typhus, which is caused by Rickettsia prowazekii; and relapsing fever, which is caused by Borrelia recurrentis. Treatment includes permethrin, ivermectin, and malathion.



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Clinical Features

Pediculosis Capitis, Corporis, Pubis
Pedicure-foot Capitis-captain with Corporis-pork and Pubes
Pediculosis refers to infestation by lice, which are blood-feeding ectoparasites of the order Phthiraptera. Capitis, corporis, and pubis refer to the locations where these ectoparasites infest.

Pruritis
Prairie-dog
Pruritis (itching) and associated excoriations are common in patients with lice infestation. Pruritus is caused by an allergic reaction to lice saliva injected during feeding. Regions of the body affected depend on the source of the infection. Head and neck are most commonly affected by head lice; axilla and torso are usually affected by body lice; pubic and/or perianal regions are commonly affected by pubic lice.

Hyperpigmentation
Hiker-pig with Hyperpigmentation
Prolonged infestation can result in post-inflammatory hyperpigmentation due to epidermal and/or dermal melanosis. These hyperpigmented lesions are usually located at the neck, waist, and axilla.

Louse-borne Diseases

Trench Fever
Trench Fever-beaver
Trench fever is one of the louse-borne diseases characterized by a five-day fever of the relapsing type. These patients also develop myalgias, headache, and hyperaesthesia of the shins. The louse carries Bartonella quintana and transmits it to humans.

Bartonella Quintana
Bartender-Hen and Queen
Bartonella quintana is a gram-negative bacteria transmitted by the human body louse. Bartonella quintana is the causative organism of trench fever.

Epidemic Typhus
E-pick Typhoon
Epidemic typhus is one of the louse-borne diseases, which is characterized by headache, fever, cough, rash, myalgias, chills, hypotension, and photophobia. The rash usually begins on the chest about 4-5 days after the fever appears and spreads to the trunk and extremities.

Rickettsia Prowazekii
Rackets-Pro
The body louse can transmit Rickettsia prowazekii, which is a gram-negative, aerobic bacillus that is the etiologic agent of epidemic typhus.

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Relapsing Fever

Relapsing-fever-beaver

Relapsing fever is another one of the louse-borne diseases. Patients with relapsing fever present with a sudden onset of fever and an intervening afebrile period, followed by recurrent episodes of fever.

Borrelia Recurrentis

Barrel-Burglar Recurrent-Episode TV

Borrelia recurrentis is a spirochete transmitted by the human body louse. This organism is the causative agent of relapsing fever.

Treatment

Permethrin

Persian-kitten

Topical permethrin (pyrethroid) is used for the treatment of body louse infestation. Pyrethroids are neuropoisons that act by preventing the closure of the voltage-gated sodium channels in the axonal membranes.

Malathion

Marathon-Iron

Malathion is an acetylcholinesterase inhibitor that is neurotoxic to lice. The topical form of malathion can be used for the treatment of lice infestation, particularly in patients who are resistant to permethrin.

Ivermectin

Ivory-medicine-man

Ivermectin can be used for the treatment of lice infestation. This medication causes an influx of chloride ions through the cell membrane by activation of ivermectin-sensitive ion channels. This results in hyperpolarization and muscle paralysis in the parasite. Topical ivermectin is one of the first-line treatments, while oral ivermectin is used in patients with refractory infestations.

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