Letters to the Editor

A possible role for human follicle mites in skin’s defense against bacteria

Sir,

Free fatty acids constitute 10-30% of the human skin surface fat but occur in only small amounts in the skin lipids of most other animals.\[1\] This difference has been tentatively attributed to the rather unique bacterial flora of humans, in particular Propionibacterium acnes and its lipase action on sebum triglycerides. Analysis of pure sebum from isolated human sebaceous glands showed the presence of triglycerides but not free fatty acids, monoglycerides or diglycerides.\[2\] It has been suggested that unsaturated fatty acids, particularly oleic acid, play an important role in elimination of Streptococcus pyogenes and Staphylococcus aureus from human skin.\[3\]

Herein, I would like to suggest that not only the unique bacterial flora of humans, but also the follicle mites could play an important role in the skin’s defense against pathogenic bacteria. Demodex folliculorum, the follicle mite, is an obligate parasite of the human pilosebaceous follicles. A morphologically distinct species, D. brevis, occupies the sebaceous and meibomian glands.\[4\] Follicle mites show a predilection for areas of high sebum production and are most numerous on the forehead, cheeks, nose and nasolabial folds but they are also found on the scalp, in the external ear, in eyelash follicles and meibomian glands and on the upper chest and nipples. They have also been discovered on the penis, mons veneris, buttocks and in ectopic sebaceous glands in the buccal mucosa. Most infested follicles contain 2-6 mites but occasionally they are much more numerous. Mites have been isolated from humans of all ages except neonates.\[5\]

Importantly, like bacterial flora found on human skin, follicle mites have been shown to contain immunoreactive lipase,\[6\] which can produce free fatty acids from sebum triglycerides. Hence I suggest that follicle mites could play a role in the human skin’s defense against pathogenic bacteria, particularly against Staphylococcus aureus and Streptococcus pyogenes.

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Cutaneous larva migrans of the genitalia

Sir,

Cutaneous larva migrans (CLM) is a peculiar dermatitis caused usually by penetration of the skin by hookworm larvae. Common sites of involvement are feet (interdigital spaces, dorsa of feet and the medial aspect of soles), buttocks and hands. We report a case of CLM confined to the penis.

A 35 year-old uncircumcised male presented with an itchy eruption on the penis of four months duration. It started as a small papule on the ventral surface of penis, near the frenulum and subsequently progressed proximally in a serpiginous fashion. He gave a history of a crawling sensation underneath the skin. He denied any history of extramarital sexual exposure. Previous therapies with various topical and systemic antifungals were ineffective.

Cutaneous examination revealed a slightly raised, erythematous, serpentine eruption on the ventral surface of the penis extending from the frenulum to the junction of middle and upper 1/3rd of the shaft of the penis [Figure 1]. The distal end was marked by a pearly-white papule. His complete...
blood count showed eosinophilia and stool examination for parasitic ova and cysts were negative. He was treated with albendazole 400 mg twice daily for three days. Progression of the lesions was halted in three days and complete resolution was seen in a week.

Numerous organisms can cause cutaneous larva migrans (CLM): Ancylostoma brasiliensis, A. caninum, Uncinaria stenocephala and Bubostomum phlebotomum. A. brasiliensis and A. caninum (the dog and cat hookworms) are the most common causes. Most of the larvae are unable to undergo further development in humans (accidental host) and die within 2-8 weeks time. Though the condition is worldwide in distribution, it is substantially more common in tropical and subtropical countries. Activities that increase the risk of infestation include walking barefoot on a beach, working in the garden and playing in sandpits. The incubation period varies between 1-6 days. The clinical features of CLM vary from nonspecific dermatitis at the site of penetration of the larva to a typical creeping eruption.

After penetration, the larva can lie quiescent for weeks or immediately begin their creeping activity. The characteristic lesion of CLM consists of slightly raised, erythematous thread-like linear or serpentine tracks. The condition is extremely itchy. Large number of larvae may be active at the same time with the formation of a disorganized series of loops and tracks. The larva usually lies somewhat in front of the head of the track. Vesiculobullous lesions along the tracks and folliculitis are other uncommon manifestations. Excoration and impetiginization of the lesion are common.

CLM confined to the penis is very rare with the mode of larval entry being unclear in such cases. Our patient hails from the coastal area and used to spend his leisure time on the beach. Karthikeyan et al have speculated that the habit of not wearing any underwear while playing on the beach is a possible cause of such penetration. This could be applicable to our patient too.

Skin biopsy is of little help and the diagnosis is mainly clinical. Epiluminescence microscopy is a noninvasive method to detect larva and confirm diagnosis. Differential diagnosis of CLM includes cercarial dermatitis, migratory myiasis and contact dermatitis. Surgery and cryotherapy are ineffective as the larva is easily missed, being ahead of the visible track. A single dose of Ivermectin (150-200 µg/kg) is the best treatment. Albendazole (400-800 mg/day) for three days and topical thiabendazole (10%) are also useful.

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Figure 1: Serpiginous tract on the shaft of penis

Letters to the Editor

Comedone-like changes overlying neurofibromas

Sir,

Three females aged 35, 38 and 16 years with type 1 neurofibromatosis, were seen in the skin department. None of them had a similarly affected first degree relative. All of them had more than six cafe-au-lait macules with multiple cutaneous neurofibromas. Two of them had more than two iris Lisch nodules. On close examination, some of the cutaneous neurofibromas showed follicular dilatation and plugging resembling comedones on their surface [Figure 1].