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Multiple Bites from the Larvae of the Tick *Ixodes ricinus*

A Case Report

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The case is presented of a 32-year-old man with multiple reddish-blue papules on both thighs and sporadic on the lower part of the trunk and lower legs, clinically compatible with multiple 'insect' bites. The lesions were found to be multiple bites from larvae of the tick *Ixodes ricinus*. The larvae are about 1 mm long, live very close to the ground, and mainly parasitize small rodents. They are, therefore, generally not well known. Although seldom encountered, we suggest that bites from the larvae of the tick *Ixodes ricinus* should be kept in mind in patients with multiple 'insect' bites, especially in periods with high tick activity. The differential diagnosis is important because the larvae may cause infection with the spirochete *Borrelia burgdorgferi*.

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Bites from the adult tick *Ixodes ricinus (I. ricinus)* and their association with Borreliosis are well known (1). In general, only a few ticks are found that feed on the skin in humans but foresters and hunters may be attacked by several ticks. The adult tick measures from 2.5 to 3.5 mm, but can grow to more than 10 mm when feeding on the skin (2). Although the tick bite is painless, bites from adult ticks will, due to their size, probably not pass unnoticed, whereas bites from the smaller nymphs and larvae may very well do so, as the larvae measure only about 1 mm (2, 3). Furthermore the larvae are not generally well known and may not be perceived as a tick when found on the skin. We report a case of a 32-year-old man, who reported to the clinic for venereal diseases because he believed he was infested with the pubic louse, *Phthirus pubis*.

CASE REPORT

The patient was a 32-year-old biologist, who ultimo May 1988 had been on a picnic with some of his colleagues. They had been resting for long time at the edge of a glade. All, except our patient, sat on a rug, while our patient sat directly on the ground, wearing shorts. In the evening, he noticed 10 to 15 small parasites proximally on both thighs. He had no pain or itching. He succeeded in removing most of them by topical application of ethanol. However, a few parasites had to be removed with tweezers and one of these were isolated on an objectglass. He feared that it might be morpiones and the next day he reported to the clinic for venereal diseases.

The clinical examination revealed multiple reddish-blue

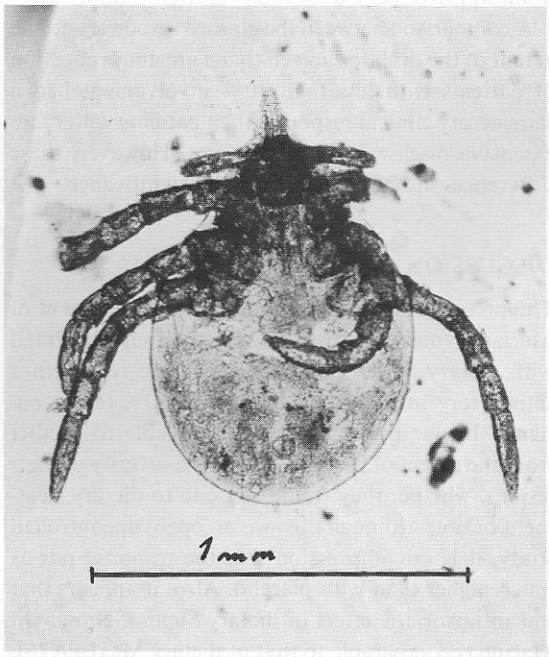

Fig. 1. The small larva of the tick *I. ricinus*.

papules proximally on both inner thighs and sporadic lesions on the lower part of the trunk and lower legs. A tiny stab wound could be seen at the top of some of the papules. The lesions were strictly demarcated by the edges of his underwear and no lesions at all were found in the pubic area. Although there was no itching or excoriations, clinically it looked like multiple bites from fleas. Light microscopic examination of the parasite showed that it was not the pubic louse and the parasite was classified as a larva of the tick *I. ricinus* (performed by Alice Olesen, Danish Pest Infestation Laboratory) (Fig. 1).

The patient was followed for 2 months but no signs of erythema chronicum migrans were found and two serum samples performed after 2 and 8 weeks for antibodies against *Borrelia burgdorferi* proved negative.

DISCUSSION

The developmental cycle of the common tick *I. ricinus* (a mite) is generally 3 years, with a duration of each developmental stage (larva, nymph, adult) of 1 year (1, 4, 5). After engorgement, the female oviposits and lays about 2000 eggs (6, 7). When the larvae are hatched, 300 to 400 can be found within an area of 20 to 30 cm^2 (personal communication, Peter Gjelstrup, Curator at the National Historic Museum, Aarhus). The larvae have 6 legs (Fig. 1) and measure about 1 mm, while the larger nymphs and adults have 8 legs (2, 3). The larvae are found in the vegetation very close to the ground, the nymphs slightly higher, while the adults may be found about 1 meter above the ground. Therefore, larvae in general feed on small rodents (6), while larger animals, and humans, are hosts for the nymphs and adults. The peak of spring larval activity in European countries occurs in late May (5). We, therefore, believe that our patient had been sitting on the top of myriads of larvae being in their host-seeking phase.

Although probably seldom encountered, we suggest that bites from larvae of the tick *I. ricinus* should be kept in mind in cases of multiple 'insect' bites and especially in May–June and August–September, which are the peak periods of tick activity (1, 5). The differential diagnosis is important because the larvae may cause infection with the spirochete *Borrelia burgdorferi* (8).

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Start and End of the Effects of Terfenadine and Astemizole on Histamine-induced Wheals in Human Skin

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A study was made of effects of two antihistamines, terfenadine (60 mg twice daily) and astemizole (10 mg once daily) on wheals induced by histamine dihydrochloride (10 mg/ml) in the prick test on the upper back of 15 healthy students. The suppressive effects of terfenadine on the histamine wheal appeared earlier (2 h), and disappeared earlier (within 1 day) than those of astemizole (3 days and 28 days, respectively). No difference between the maximal effects of the two drugs was seen. ***Key words: Prick testing; Histamine H_1 antagonists.***

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