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Paederus Dermatitis Mimicking Herpes Zoster

Enver Turan,[1] MD, Işın Sinem Bağcı,[2] MD, Yeliz Karakoca Başaran,[3] MD, Burcu Işık,[4] MD, Nurdan Yurt,[5] MD

Address: [1]Harran University Faculty of Medicine, Department of Dermatology, Şanlıurfa, Turkey, [2]Department of Dermatology, Istanbul Education and Research Hospital, Istanbul, Turkey, [3]Şanlıurfa Education and Research Hospital, Dermatology Clinic, Şanlıurfa, Turkey, [4]Ministry of Health, Ordu University, Education and Research Hospital, Dermatology Clinic, Ordu, Turkey, [5]Dermatology Clinic, Gümüşhane Government Hospital, Gümüşhane, Turkey
E-mail: enverturan@gmail.com

** Corresponding Author:* Enver Turan, MD, Department of Dermatology, Faculty of Medicine, University of Harran, Şanlıurfa, Turkey

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Abstract

Observations: Paederus dermatitis is a a peculiar, irritant contact dermatitis characterized by a sudden onset of erythematous and bullous lesions caused by an insect belonging to the genus Paederus. Several atypical clinical presentations simulating other diseases have been described. Herein, we describe a case of a 15-year-old girl with paederus dermatitis mimicking herpes zoster.

Introduction

Paederus dermatitis (also called linear dermatitis or whiplash dermatitis) is an irritant contact dermatitis caused by Paederus genus of the worldwide distributed Staphylinidae family of the order Coleoptera [1]. The active agent is usually referred to as pederin, although it may be similar molecules such as pederone and pseudopederin depending on the beetle species [2]. It is a self limited dermatosis characterized by linear or angulated patterned vesico-bullous lesions or erosions showing confluence on an erythematous base [1]. A great number of cases were reported from the countries with a tropical climate such as Australia, West Africa, Iran, Italia, Nigeria, Sri Lanka, Tanzania, Venezuela and India as well as from Turkey, particularly from Çukurova, Aydın and Denizli region.

Several atypical clinical presentations simulating other diseases have been described: Periorbital swelling of acute glomerulonephritis, sexually transmitted disease [3], blunt trauma, superficial abrasions on eyelid and scalp [4]. We report the first case of paederus dermatitis mimicking herpes zoster.

Case Report

A 15-year-old girl was referred to our clinic with the complaint of an erythematous rash on the left side of her back of 3 days duration. The lesions had spread from the middle line of the back towards the left lumbar region, and they did not cross the middle line. The patient complained of mild itching and a significant burning sensation around the lesion. She denied any bugs or insect bites. The history was negative for shingles, as well as for previous varicella-zoster vaccination. No other similar lesions were present in other cutaneous areas. Routine blood examinations, electrocardiography and chest radiography were all normal.

An examination revealed a grouped papulo-vesicular eruption and crusts on an erythematous base

Figure 1. Erythematous plaques with vesicles or pustules localized to the T4-T7 dermatome of the left back

on the left side of the patient's back. The lesions were unilateral and did not cross the midline (**Figure 1**). We did not find any evidence of herpes with a Tzanck smear test. Swab material taken from the pustules was cultured, but no growth was established. Microscopic examination of scales obtained by scraping the lesions with 20% KOH did not reveal hyphae or spores. All laboratory values were within normal limits. Serological test results for HIV and syphilis were negative, as were tests for herpes zoster (VZV IgG/ IgM). Based on the clinical presentation, the laboratory findings and an increase in the number of similar cases, a diagnosis of paederus dermatitis was made.

Wet dressings and topical steroid treatment were given to the patient. Follow-up one week later examination revealed hyperpigmentation of the lesion. The lesions had healed completely after 4 weeks, without scarring.

Discussion

Paederus dermatitis is characterised by the sudden appearance of vesicular and pustular lesions on an erythematous base, with a burning, stinging sensation. It is generally seen in exposed parts of the body with a linear configuration and heals with hyperpigmentation in about two weeks [**5**]. Washing the lesions with soap and water shortly after contact with the insect will remove the irritant substance from the skin and prevent the development of severe symptoms.

The list of differential diagnoses of Paederus dermatitis, which mimics many dermatological diseases, is quite extensive. The lesions can mimic thermal burns, allergic or irritant contact dermatitis, herpes zoster, herpes simplex, cantharidin dermatitis, phytophotodermatitis, pustular psoriasis, bullous impetigo and Sneddon–Wilkinson disease. Lesions around the eye may be confused with periorbital cellulites [**3, 6**]. In the current case, unilateral vesiculopustular lesions on an erythematous base accompanied by a sensation of burning and stinging led to difficulties in the differential diagnosis of herpes zoster. However, the sudden onset of the lesions, the concurrent rash and symptoms, the hot climate, the detection of similar cases and no special features on the Tzanc smear test led us to the diagnosis of Paederus dermatitis.

The diagnosis is usually made clinically. Paederus dermatitis can easily be diagnosed with vesiculopustular erythematous skin lesions, with a sudden feeling of burning and stinging. Hot climatic conditions, an increase in similar cases, whiplash linear lesions or kissing lesions and drip marks support the diagnosis [**7**]. Cases with atypical clinical findings, such as severe necrosis, diffuse erythema and desquamation have been reported [**8**]. Neuralgia, arthralgia, fever and nausea or vomiting may occur in severe cases [**9**].

Prevention involves avoiding contact with the beetles, particularly during May–June when they are found in high numbers. Doors and windows should be closed during the night while sleeping to prevent the entry of the insects, and sleeping areas should not be lit up. People should take care not to crush or smash the insects on the skin. In the first step of treatment, the affected area of the skin should be washed with soap and water. Wet dressings and potent topical steroids are also very useful.

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