Images in Medicine

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Striking Whiplash Lesions: A Rare and Classic Case of Severe Manifestation of Paederus Dermatitis

Dermatology Section

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A 26-year-old male patient reported to the outpatient department of Ayurveda in a tertiary care institute of Western Maharashtra with a prominent linear skin lesion on the ventral right mid-forearm with redness, burning, itching, pain, and blistering. The lesion appeared three days ago, 12-24 hours after accidental contact with an insect. On further questioning, the patient recalled that an insect had been crushed or brushed against the ventral aspect of his right forearm around three days prior. He did not report fever, malaise, or other systemic symptoms. Initially, erythematous and itchy, later developed blisters, pain, and greyish necrotic appearance. No chronic illnesses, medications, or allergies were reported. No relevant family history was noted. The patient worked outdoors and resided in a rural area, with a history of increased insect exposure during the monsoon season. The patient did not give any history of smoking, alcohol consumption, or substance use. On general examination, the patient was afebrile with stable vital parameters. No lymphadenopathy was present, and systemic examination was within normal limits. On local examination, a well-defined linear erythematous lesion with vesicles and greyish necrotic areas was observed on the ventral surface of the right mid-forearm. The lesion was tender, with mild surrounding inflammation. No laboratory investigations were performed as the diagnosis was clinically evident based on the characteristic lesion morphology and absence of systemic involvement. Based on the typical linear "whiplash" lesion, history of insect exposure, and clinical findings, a diagnosis of Paederus dermatitis was established [Table/Fig-1].

[Table/Fig-1]: Striking 'Whiplash' Lesions: a rare and classic severe manifestation of paederus dermatitis on ventral surface of the right mid-forearm.

The differential diagnoses considered included herpes zoster, irritant or allergic contact dermatitis, phytophotodermatitis, and impetigo. The lesion showed classic linear erythema with vesiculation and necrosis, confirming the clinical impression of Paederus dermatitis [1]. The patient was treated with topical corticosteroid cream, oral antihistamines, and analgesics. These medications were prescribed by the Ayurveda consultant after discussing with the Department of Dermatology. The patient was advised to keep the area clean, avoid rubbing or scratching, On follow-up, he showed significant improvement: at one week, erythema and vesicles reduced; at two weeks, vesicles resolved and necrotic areas were healing; at three weeks, the lesion was nearly healed with faint hyperpigmentation; and by one month, it had completely resolved with minimal residual hyperpigmentation, requiring no further treatment.

Follow-up at two and three weeks showed progressive healing of the lesion [Table/Fig-2,3].

DISCUSSION

Paederus dermatitis is an under-recognised cause of acute skin lesions in tropical regions; early recognition of its features allows early diagnosis and management. This condition is relatively common in tropical regions and is frequently reported during the monsoon season, particularly in rural and semi-urban areas where human interaction with insects is more likely. Prevalence can reach up to 26.4% of the population during peak seasons, underlining its public health relevance [2]. Paederus dermatitis is classified as an irritant contact dermatitis that occurs after exposure to the Paederus beetle, a member of the Staphylinidae family commonly known as the rove beetle [3]. These insects are small, elongated, and more active during warm and humid weather [4]. They neither

[Table/Fig-2]: Two-week follow-up showing resolution of vesicles and progressive healing of necrotic areas.

[Table/Fig-3]: Three-week follow-up demonstrating near-complete healing with faint residual hyperpigmentation.

bite nor sting; instead, these characteristic skin changes are caused by the transfer of toxin from the insect, which spreads further if the affected area is rubbed or wiped [5]. Pederin inhibits protein synthesis and mitosis in skin cells, leading to severe inflammation and tissue necrosis. Rubbing the area spreads the toxin to nearby skin, producing additional lesions known as "kissing" or "whiplash" lesions [6]. The condition is not contagious but can cause marked discomfort, and untreated lesions may develop secondary bacterial infections due to scratching or poor hygiene. The appearance of the lesion and its history of sudden onset can be useful in differentiating this condition from other dermatological disorders such as herpes zoster (shingles), irritant or allergic contact dermatitis, phytophotodermatitis and impetigo [7]. The patient was advised gentle cleansing, prescribed topical corticosteroids, antihistamines, and analgesics, and instructed to avoid rubbing or scratching the lesion. These measures resulted in complete healing within one month, with only mild residual hyperpigmentation and no secondary infection. Preventive strategies play a crucial role, particularly in endemic regions during the monsoon season. Using mosquito nets and window screens, reducing bright lights at night, helps reduce indoor beetle exposure. Educating communities about identifying these insects and encouraging them to wash their skin immediately after suspected contact are essential public health measures to limit the occurrence and severity of outbreaks [3]. A 2024 study of 15 patients reported sudden-onset burning lesions, mainly linear, appearing 2.5 days after exposure, with recovery in 13 days using topical treatments [1]. Similarly, an analysis of 81 patients found erythematovesicular lesions in 70%, linear in 54%, and kissing lesions in 28%, with pain, itching, and tenderness resolving in 13 days with steroids [8]. This case highlights the importance of early recognition of Paederus dermatitis based on its characteristic clinical presentation, including linear 'whiplash' lesions or erythematous lesions with vesiculation and necrosis following insect contact. Public awareness and preventive strategies, particularly during the monsoon season, are crucial to reducing disease burden in endemic regions. Clinical images, as presented, can aid physicians in differentiating Paederus dermatitis from other dermatological conditions such as herpes zoster, contact dermatitis, phytophotodermatitis, and insect bite reactions.

CONCLUSION(S)

The present case demonstrates the classic clinical features of Paederus dermatitis, including a linear "whiplash" lesion with erythema, vesiculation, and necrosis following accidental insect contact. Prompt clinical recognition and appropriate symptomatic treatment resulted in complete resolution without complications. This case underscores the importance of recognising the hallmark features of Paederus dermatitis for timely management and prevention. Public health education and early intervention can mitigate complications and reduce disease incidence in endemic areas.

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