

## Rare Case of *Paederus* Dermatitis Presented with Periorbital Edema and Erythema

### ABSTRACT

A 41-year-old male presented to the outpatient department with periorbital erythematous rash and swelling with burning pain since 1 day. The patient is a resident of Jakarta (Indonesia). He gives a history of insect bite likely due to a bee sting, a day before travelling to India. He also gives history of similar rashes following insect sting 3 months ago in Jakarta. He was given anti-Histamine, small dose of oral steroid and topical steroid. The patient improved symptomatically with treatment given.

**Key words:** Burning pain, Erythematous rash, *Paederus* dermatitis, Steroid

### INTRODUCTION

*Paederus* dermatitis (PD) is common disease occurs in worldwide, especially in tropical and subtropical regions. PD has also been reported from Odisha, West Bengal, Punjab, Rajasthan, and Tamil Nadu. It is characterized by erythematous, vesiculobullous eruptions, which occurs after contact with the vesicant chemical contained in the body fluids of the insect. We report an unusual cause of PD presenting with periorbital edema and erythema.

### CASE REPORT

A 41-year-old male patient, resident of Jakarta (Indonesia) came to India, presented with complaints of periorbital erythematous rash and swelling with burning pain since 1 day. He was apparently alright one day ago when he noticed swelling and erythematous rash around his eye with burning pain. He gives a history of insect bite likely due to a bee sting, a day before travelling to India. He gives history of similar rashes following? Insect bite, 3 months ago when he was staying in Jakarta.

On general examination, the patient was found to be conscious and well-oriented. Afebrile having temp 99.8F, Pulse -96/min regular. All peripheral pulses well felt and respiratory rate-18/min. and abdominal-thoracic in nature. Oxygenation (spo2) is 98% on room air. Blood pressure is-130/70 mm of Hg in the right upper limb, in the supine position. The patient was also found to have mild bilateral pedal edema, which was of pitting nature. There is no pallor/icterus/cyanosis/clubbing or lymphadenopathy.

On systemic examination, no significant abnormalities were detected in any of the systems. Local examination shows bilateral periorbital edema with swelling [Figure 1] peri-orbital dermatitis and occasional blister formation. There is also an erythematous and scaly lesion with burning pain. This type

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of skin lesion is also known as rove beetle rash, dermatitis linearis, spider lick, and night burn lesion.

The patient was started on Tab. Prednisolone 10 mg once a day, Tab. Bilastine 20 mg once a day, and Tab. Rabeproazole 20 mg once a day and topical fusidic acid cream and mometasone cream twice a day. The patient started improving on this regimen, and the rashes and swelling started decreasing.

### DISCUSSION

PD, also known as dermatitis linearis, is a skin irritation occurring following contact with the hemolymph of certain rove beetles, a group that belongs to the insect order *Coleoptera* and the genus *Paederus*. Synonym for PD also called as spider-lick, Whiplash dermatitis, and Nairobi fly dermatitis.<sup>[1]</sup> Tomcat includes strains of beetle family of insects [Figure 2] or more precisely beetles also called Ants “Semai.”

*Paederus* beetles do not bite or sting but cause skin irritations and blisters when accidentally brushed or exposed against the skin provoking them to secrete its coelomic fluid which contains a strong chemical which may cause blister. The active chemical in the coelomic fluid is commonly called as paederin, and depending on the beetle species, it may



Figure 1: Tomcat insect/Paederus beetle



Figure 2: Left Periorbital dermatitis



Figure 3: Left side of neck- Irritant dermatitis

secret various similar molecules including paederone and pseudopaederin. Once paederin come in contact with skin, it may spread elsewhere on the body. "Kissing" or "mirror-image" lesions where two skin areas come in contact with

each other are common presentation seen. After 12–36 h with skin contact with paederin, it may manifest as a reddish rash (erythema) appears, which develops into blisters. Irritation, including crusting and scaling, may last for few days. The paederin may come in contact with other parts of body such as eyes and genitalias after initial involvement. It presents as a keratoconjunctivitis or periorbital dermatitis and is popularly known as the "Nairobi Eye." Periocular lesions frequently occur secondary to transfer of pederin by the fingers from elsewhere on the skin.

Characteristics of the Tomcat affected skin is very individual, can be mild to severe: It appear reddish color of the skin (Erythematous rash) or it may be itchy, irritation, or inflammation of the skin (Burning pain). It may appear like blistered skin due to irritation (vesical formation) and result in pus formation (pustule formation). "Kissing lesions" where two adjacent flexural surfaces come together<sup>[3]</sup> and develop mirror image lesion. Tomcat will automatically release the liquid in the event of a collision with a touch of human skin. Can be touched indirectly through towels, clothing or other equipment contaminated by tomcat poisonous. That's why, if come in contact such as sheets, towels, and equipment exposed to toxic tomcat should allegedly be washed.

If one comes in contact with Tomcat, then management is similar to that of an acute irritant dermatitis. Immediate removal of the toxin may be possible if the patient comes in contact with insect. The site of area which comes in contact should be washed with soap and water. Oral antihistaminic like bilastin should be given along with analgesics. Soothing agents such as calamine, camphor, and topical anesthetics (lidocaine and benzocaine) have been used for temporary relief of itching and burning sensations. Silver sulfadiazine has antibacterial activity which can be used topically to alleviate symptoms.

## CONCLUSION

Paederus Dermatitis is rare in India. Due to migration of people from one country to other, disease also spread gloably. Our patient who is an Indian citizen, works in Jakarta (Indonesia) and when he visited India, presented with PD (Tomcat dermatitis). History of travel and clinical examination along with suspicion of the disease is crucial for diagnosis. *Paederus* beetles tend to thrive in tropical climates during the rainy seasons. It is better to know about this *Paederus* beetles (Insect) and its clinical manifestation following its exposure.

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