

## Looks familiar but not the same rash

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### Case Summary

An 8-year-old boy was brought by his mother to the emergency department (ED) at the Hospital Raja Perempuan Zainab 2 (HRPZ2) with a history of a painful vesicular rash over the right axilla area. The rash had developed 3 days prior and become increasingly painful. On the second day of the illness, the patient was seen by a local general practitioner (GP) and diagnosed with shingles. The GP treated the patient with an analgesic and gave the patient calamine lotion to apply over the rash. The next day, the patient developed a fever, prompting his mother to bring him to the ED. He denied any recent history of trauma or insect bite/sting in the affected area. He had no history of allergic reactions.

On examination, the patient was febrile and in mild to moderate pain. The rash appeared to have an erythematous margin with multiple vesicles at its center (**Figure 1**). The whitish patch seen at the center in the figure is the remnant of the calamine lotion applied by his mother prior to coming to the ED. The area was warm and tender. The patient did not have any lymphadenopathy. No other rashes were found elsewhere on the body.

The case was reviewed by the HRPZ2 Dermatology team on call, and the patient was diagnosed with Paederus dermatitis. He was prescribed an oral antibiotic, antihistamine, and analgesic and was also asked to wash the rash daily with diluted potassium permanganate for a week.



**Figure 1:** An erythematous vesicular rash over the right axilla area.

### Discussion

Paederus dermatitis is caused by an insect that is known in Malaysia as Charlie. It is known elsewhere as the Rove beetle.<sup>1,2</sup> The adult Paederus beetle has a distinctive black and red-orange pattern (**Figure 2**). Adults range in size from 5 to 25 mm in length, and all but a few species are capable of flight.<sup>3</sup> Paederus are mostly nocturnal but can be active during daylight hours.<sup>2</sup> They are also quite common, especially during the rainy seasons, and there have been reported outbreaks of Paederus dermatitis in countries such as Australia, Turkey and Sri Lanka, particularly from May to July.<sup>4</sup>



**Figure 2:** Paederus Littoralis.<sup>8</sup>  
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Paederus releases a potent toxin, paederin, which causes an acute contact dermatitis associated with pain in the form of a burning sensation over the contact area, with erythema and pruritus developing within 24 hours for mild dermatitis; for moderate dermatitis, vesicles will develop in 48 hours.<sup>5,6</sup> More severe dermatitis has a similar presentation to the moderate type but may have systemic symptoms such as fever, neuralgia, arthralgia and vomiting; the erythema may last for months post exposure.<sup>6</sup> Paederus dermatitis is often confused with shingles, as they can be similar in appearance. Therefore, it is important to obtain a history of any contact with insects and recent trips to areas infested with these beetles, which include agriculture areas and camping sites, where the beetles can be attracted by camping lights.<sup>4</sup> The dermatological findings usually reveal multiple bizarrely shaped, eczematous lesions on exposed areas such as the face, trunk and upper extremities, whereas

shingles, although it can appear anywhere on the body, most often appear as a blister strip in the torso area.<sup>4</sup>

In mild to moderate cases, such as presented here, the symptoms and signs often self-resolve within 2–4 weeks and typically require an analgesic and antihistamines; whereas, in severe cases, the use of oral and topical antibiotics help to prevent and treat any concurrent infection as well as reduce the healing time.<sup>2,7</sup>

### Questions

1. What is the provisional diagnosis?
2. What are the differential diagnoses?
3. What are the treatment options for this case?

### Answers

1. Paederus dermatitis, which is also referred to as dermatitis linearis, rove beetle dermatitis and blistering beetle dermatitis.<sup>3</sup>
2. The clinical differential diagnoses for paederus dermatitis include bullous impetigo, herpes simplex, herpes zoster, contact dermatitis (allergic or irritant), burns, and phytophotodermatitis.<sup>1,6</sup>
3. Treatment includes washing the affected area rapidly; applying cold, wet compresses; and possibly treating with antibiotics, steroids, and antihistamines.<sup>7</sup>

**Conflict of interest:** None

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