

## Research Note

### A fatal case of anaphylactic shock caused by the lesser banded hornet, *Vespa affinis indosinensis* in peninsular Malaysia

Lee, H.L., Krishnasamy, M. and Jeffery, J\*.

Unit of Medical Entomology / IDRC, Institute for Medical Research, Jalan Pahang, 50588 Kuala Lumpur, Malaysia.

\*Department of Parasitology and Medical Entomology, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia.

**Abstract.** The hornets are a group of venomous stinging insects that at times cause human death. A fatal case of a child stung by the lesser banded hornet *Vespa affinis indosinensis* is reported. Though often covered by the mass media, this constitutes the first scientifically reported case.

The lesser banded hornet, *Vespa affinis indosinensis* (Hymenoptera: Vespidae) is a common species in Malaysia. This hornet is widely distributed in the Oriental region. In Malaysia three species of social vespid wasps are of medical importance – *Vespa affinis indosinensis*, *Vespa analis* and *Vespa tropica*.

*Vespa affinis indosinensis* Perez is readily distinguished by its characteristic yellow banding on the 1<sup>st</sup> and 2<sup>nd</sup> abdominal segments. This hornet is the most aggressive of the social hornets in Malaysia. It will attack in swarms at the slightest provocation. It builds its nests close to human dwellings. The most distinct feature of hornets is their readiness to protect themselves by stinging. Crossing the flight path of workers, getting too close to the nest or disturbing the hornet may result in attack. Like other wasps in Malaysia, the lesser banded hornet is able to sting repeatedly. This is quite different from bees, which can only sting once.

The lesser banded hornet is a large species measuring approximately 20 – 25 mm in length, with a brownish – red or black head and thorax with dark brown legs. The front half of the abdomen is orange or yellow and the remaining three are black or dark brown. The wings are of a smokey brown colour and not transparent like other common wasps. In this paper a fatal case of a child stung by the lesser banded hornet is reported.

#### Case report

A 11 years old boy attacked and stung by the lesser banded hornet was brought for treatment after some delay. He was found in severe anaphylactic shock. Although standard treatment was administered, death however, ensued. Over the years reports of hornet attack causing death have appeared in the local news media. One case illustrating this was that of a boy (a standard 4 pupil) who was attacked by the lesser banded hornet in Marang, Kuala Terengganu. He died the same day

although was given appropriate treatment. (New Straits Time, 1/10/86).

The degree of severity of hornet sting depends on several factors such as the amount of venom injected into the victim, the potency of the venom and the sensitivity of the victim. Logically, the bigger the amount, the more severe the effects. The present case probably constitutes the first formal report of fatal hornet sting in the country.

Further epidemiological studies on wasp or bee stings need to be carried out. Desensitization therapy may be useful for

those known to be hypersensitive to stings. It is also advisable that those, especially in close contact with these insects be educated on the danger of hornet sting and preventive measures to be undertaken.

*Acknowledgement.* The authors thank the Director, Institute for Medical Research, Kuala Lumpur for permission to publish. Thanks are also due to Dr. Foo Lai Sin, from Jabatan Kanak-Kanak, Hospital TAR Klang, for sending the hornet specimen.