

Severe anaphylaxis following ant bites

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Introduction

Ant bites causing severe anaphylaxis has not been reported in Sri Lanka before. Ant bite is an environmental hazard in south-eastern part of America [1]. In Asia and Australia similar cases have been reported recently [2].

Case Reports

Case 1

A 30-year old female developed itchy rash, fever, faintishness and vertigo one hour after being bitten by about 25 ants. She was allergic to beef. On examination her pulse rate was 110/minute, blood pressure was 70/50 mm Hg and there were bilateral rhonchi on auscultation. We ensured her airway and oxygen was given via face mask. Adrenaline 0.5 ml, chlorpheniramine 10 mg and hydrocortisone 200 mg were given intravenously. She was nebulised with salbutamol. An infusion of 0.9% saline was administered. She recovered after treatment and went home three days later.

Case 2

A 27-year old female developed faintishness, wheezing, pruritus and facial swelling after being bitten by black ants (number not known). There was no history of allergy. On examination she was pulseless and her blood pressure was unrecordable. She was resuscitated similar to the first patient but required ventilatory support and vasopressor infusions. Four days later she was weaned off from the ventilator and went home on the eighth day.

Case 3

A 30-year old female was transferred from Base Hospital, Dambulla after developing anaphylactic shock following black ant bite. She had developed an itchy rash, generalised body swelling and shortness of breath ½ to 1 hour after an ant bite while she was asleep. After initial treatment she was transferred to Teaching Hospital, Kurunegala.

On admission her Glasgow coma score was 3/15, blood pressure was 100/60 mm Hg and O₂ saturation was 90%. As her breathing was poor she was intubated and ventilated. She was given adrenaline, chlorpheniramine,

hydrocortisone, 0.9% saline, and dopamine. Despite the supportive treatment her condition deteriorated and she died 18 hours after admission.

Isolation and identification of ant species were done in cases two and three as *Tetraponera rufonigra* (Figure 1) and *Odontomachus simillimus* (Figure 2) respectively.



Figure 1. Worker of *Tetraponera rufonigra* (Fred Smith).



Figure 2. Queen of *Odontomachus simillimus* (Fred Smith).

Discussion

Odontomachus simillimus ('DalaKadiya') which caused fatal anaphylaxis is considered to be a high threat species belonging to subfamily Ponerinae, common in the

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wet zone of Sri Lanka. The second patient was bitten by *Tetraponera rufonigra* ('*Hathpolaya*') belonging to the subfamily of Pseudomyrmecinae. Ant venom consists of proteins, enzymes, formic acid and other chemicals. Venom differs from species to species. Skin test using ant extract, specific IgE assays and immunotherapy with whole body extract of the ant are available in some countries. Venom extraction from local species may help in the management of similar patients in the future.

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References

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