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A Bite of Confusion: When Envenomation Mimics Anaphylaxis

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Introduction

Snakebites cause morbidity and mortality worldwide, particularly in tropical regions. Malaysis hosts over 200 snake species, with approximately 20% are medically significant. A Malaysia hospital based retrospective study shows a total of 126 snake bites over five years. Snakebites presentations vary by species and venom type, with ocal and systemic effects.

Case Description

A 60-year-old woman was bitten by a snake over her right ankle while cooking in her kitchen. She experienced pain and swelling, followed by vomiting, palpitations and dizziness. She was only able to describe the snake as black with some white stripes.

Upon arrival to the ED, she was tachypneic with an SpO2 of 81% and generalized rhonchi on auscultation. Her ankle region was noted to have fang marks with surrounding blackened skin and swelling. She was then treated for suspected anaphylaxis with nebulized salbutamol and IM adrenaline.

However, her condition rapidly deteriorated. The swelling extends proximally and she began to develop bilateral ptosis with persistent breathlessness, requiring intubation. Antivenom was then administered and she was admitted to the ICU. She made a full recovery and was discharged after five days.

Discussion

Snakebite envenomation is a medical emergency with myotoxic, cytotoxic, hemotoxic or neurotoxic effects. Diagnosis is challenging, especially when it mimicks anaphylaxis, delaying antivenom. Guidelines recommend administering antivenom within four hours of the bite or as soon as systemic envenomation is identified to prevent progression.

In this case, anaphylaxis was initially suspected due to bronchospasm and hypoxia; However, the lack of response to adrenaline and the development of ptosis and respiratory failure indicated neurotoxic envenomation, warranting antivenom. Even in delayed presentations, evidence supports antivenom continued benefit.

Another key challenge was the inability to identify the snake species, making antivenom use a risk-benefit decision. While its role in reversing systemic envenomation is well-documented, it can cause anaphylaxis. Clinicians must remain vigilant for adverse reactions and be prepared to manage them.

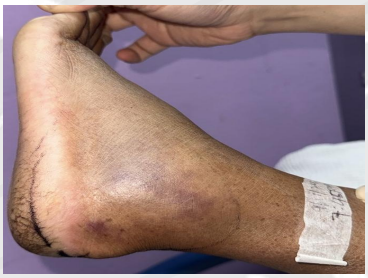

Figure 1: Dermonerosis over right ankle with fang marks

Conclusion

This case highlights the diagnostic challenge of distinguishing snakebite envenomation from anaphylaxis, particularly with respiratory distress. It is crucial for early recognition that warrants timely antivenom administration for the best outcomes for patients.

Keywords - Snakebite, antivenom, anaphylaxis

References
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