[ID-P#085] "A is for Airway and Antivenom": Managing Neurotoxic Snake Envenomation with Airway Threats in Pediatric Patients

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Introduction: Snakebites in pediatric patients present significant risks, requiring prompt identification and management. Challenges are heightened in resource-limited district hospitals. Neurotoxic snake envenomation can cause descending paralysis, respiratory muscle involvement, and airway obstruction, potentially necessitating intubation and mechanical ventilation.

Case Report: A 10-year-old, previously healthy, undocumented boy was bitten by an unidentified black snake on his left foot. He experienced pain and vomiting, seeking help at a local clinic two hours later. Dermonecrosis developed at the bite site. A priority transfer was initiated following an emergency referral to a district hospital. During transport, his condition deteriorated. He presented with bilateral ptosis, reduced consciousness, and breathing difficulties four hours post-bite incident. Oxygen therapy was continued with frequent oral suction while preparing antivenom. Ten vials of Naja kaouthia antivenom (NKAV) were administered, resulting in significant improvement documented during NKAV infusion and upon completion. Wound debridement was performed at the bitten part at Day 9 of admission and discharged at Day 14 of admission.

Discussion: This case highlights the need for vigilance in managing pediatric snakebite cases in rural health clinics. Anticipating deterioration and arranging timely transfers to well-equipped hospitals are crucial. The patient's symptoms and dermonecrosis suggested a bite from Naja sumatrana. The cross- neutralization efficacy of NKAV justified its use. Timely antivenom administration and effective airway management can prevent intubation, which requires advanced skills and poses additional risks, especially in pediatric patients. In resource-limited settings, avoiding intubation when safely feasible is vital due to limited ventilator availability.

Conclusion: Early recognition of envenomation symptoms is crucial to preventing severe complications. Understanding clinical manifestations and local snake species aids rapid, accurate diagnosis and treatment. Prompt antivenom administration, vigilant monitoring, and initial airway management can mitigate respiratory compromise progression, potentially avoiding the need for intubation.