Short Communication

Fallacies in the Management of Snakebite: First Aid to Follow-up

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ABSTRACT

Snakebite is a common seasonal medical emergency in India. Due to lack of accurate statistics it is difficult to ascertain the real magnitude of the problem. Snakebite causes considerable morbidity and mortality worldwide and India remains amongst the group of countries with very high mortality. The highest burden exists among poor rural communities because of dense population, agricultural activity, exposure to venomous snake species, and lack of basic healthcare.

Snakebite is one of the the most neglected health issues in India and therefore certain aspects need to be addressed and appropriate interventions devised to prevent deaths right from the time of snakebite to inpatient hospital treatment, discharge, and follow-up. In addition, joint effort by researchers, policy makers and regional health authorities can go a long way in improving outcome.

Key Words: Snakebite; First aid; Anti-snake venom

Introduction

The incidence of snakebite is very high in India, and while lack of accurate statistics makes it difficult to ascertain the real magnitude of the problem, snakebite causes considerable morbidity and mortality, with the highest burden among poor rural communities because of dense population, exposure to venomous snake species, and lack of basic healthcare.[1]

In spite of this, snakebite remains one of the the most neglected health issues in India, and therefore certain aspects need to be addressed and appropriate interventions devised to prevent deaths right from the time of snakebite to inpatient hospital treatment, discharge, and follow-up.[2] It is for this reason that the following guidelines have been framed which are open to scrutiny and modification:

First Aid Guidelines in Snakebite:

The aim of first aid is to reassure the patient, take steps to stop the spread of venom, and obtain medical aid by prompt transport to a medical facility. First aid recommendations vary with the type of snakes inhabiting the region. Snakebites may be deadly if not treated quickly. Most first aid guidelines agree on the following:[3,4]

R – Reassurance
I – Immobilization
G - Get to
H – Hospital
T - Tell the doctor about evolution of signs and symptoms en route to the hospital.

This has led to the framing of the acronym – Do it RIGHT.[5]

Reassurance: Keep the victim calm, as panic will raise the pulse rate and blood pressure promoting further absorbtion into circulation. It is important to be aware that not all snakes are venomous, and that not all snakes are fully charged at the time of attack, and even if fully charged, may not inject a lethal dose of venom. A bite by a venomous snake does not necessarily cause envenomation. The snake might have emptied its poison on a previous prey. Clothing can also protect the victim.

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Snake venom can cause a drop in platelet count and depletion of coagulation factors which rebound within hours of administration of anti-snake venom. Blood products are rarely necessary. However if the need is great, for e.g., very low platelets in bleeding patients, these products should be given after adequate anti-snake venom administration, to avoid adding fuel to the ongoing consumptive coagulopathy.[3]

Renal failure (usually due to acute tubular necrosis) is reversible and may require conservative treatment or dialysis. If bilateral cortical necrosis occurs, the prognosis for recovery is more grim. Rare complications like optic neuritis and ophthalmoplegia caused by snakebite have been reported.[11]

When there is no systemic envenomation, the victim should be observed for at least 24 hours clinically, and with repeated 20WBCT prior to discharge. At the time of discharge, the patient should be warned about serum sickness. In the event of serum sickness (fever, chills, urticaria, myalgia, arthralgias) developing 1–2 weeks after antivenin administration, patients may require steroids and antihistamines.[3,4]

If the patient suffered from coagulopathy early on, this may recur during the first 3 weeks after the bite. Such patients should be warned to avoid elective surgery or trauma during this period.

The outcome of snakebite depends on many factors including the species of the snake, the amount of venom injected, and health condition of the victim. Delay in seeking treatment due to lack of transport and poor access to health services leads to poor outcome.[12] Children are at higher risk of death or serious complications because of greater amount of toxin injected per unit body mass.[4] Coagulopathy is generally associated with poor outcome.[12]

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