

Snake Bite and Its Management - Educating Parents

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Abstract

Snake bites are common in Indian scenario and some are poisonous snakes and often if it's a non venomous snake bite parents and children panic and children may go in to psychological shock status and its imperative that parents are taught about the snake bite and the consequences, early management for preserving the life of children. This short article will enlighten about the parental education about snake bites for them to be proactive in prevention and seeking early interventions.

Keywords: Cytotoxic; Neurotoxic; Hematotoxic; Coagulation

Specific objectives: Parents will be able to

- Define snake bite
- Identify snake bite
- List down the risk factors
- Explain the signs and symptoms of snake bite
- Identify the types of toxicity
- Explain the first aid management of snake bite
- Enumerate the management of snake bite
- Understand the preventive measures.

Introduction

An injury caused by a bite from a snake. Especially a venomous snake bite. Snake bite both as a method of hunting and as a means of protection. 50% of bites by venomous snakes are dry bites. India's estimated snake bite per year is 200000 and 15-20000 deaths. Males are more prone for snake bite than females.

Snake venom

Snake venom is a highly modified saliva containing zootoxins that facilitate the immobilization and digestion of prey and defence

against threats. It is a combination of enzymes and non-enzymatic polypeptides, acidic in nature with a specific gravity of 1.030-1.070. Water soluble, on drying fine needle like crystals.

Identifying the snake bite

Fang mark: two puncture wounds separated by a distance varying from 8mm to 4cm, depending on the species involved. However a side swipe may produce only a single puncture while multiple bites could result in numerous fang marks. Swelling and bleeding from the site.

People at risk

People who works outside such as farmers, hunters, fishermen, forest guards etc. people who lives in tribal areas. Shelter less peoples, travellers.

In India types of snakes and the toxicity they cause, Indian cobras, common kraits, Russell's vipers are believed to be most dangerous and common type of snake bite. Common Cobras causes cardio toxic and neurotoxic, viper are hemotoxic and krait causes neurotoxicity.

Signs and symptoms

Local effects: Fang mark on the bite site. Swelling, bleeding on the affected site, discolouration, serosanguinous discharge severe pain blister formation.

Systemic effects: paralytic symptoms: early the patient may experience nausea, vomiting and headache. Loss of consciousness, ptosis, ophthalmoplegia, drowsiness, dysarthria, dysphagia, convulsion, bulbar paralysis, respiratory muscle paralysis leads to respiratory failure. Hemotoxic symptoms: epistaxis, haemoptysis, bleeding gum, haematuria purpuric spots, renal failure, cardiogenic/vasogenic shock, systolic cardiac arrest.

Pathogenesis of snake bite: Snake bite- venom injected → enters surrounding tissue direct venom action → capillary absorption (blood vessels and lymphatic) Target organs-systemic effect.

Neurotoxic

Paralysis and respiratory distress by binding the nicotinic acetylcholine receptors, prevent transmission of nerve impulses in cholinergic synapses, preventing the depolarising action of acetylcholine muscle paralysis, respiratory failure and death due by asphyxiation.

Hemotoxic

Lysis of erythrocytes leads to swelling, cardiovascular damage, necrosis blood clotting leads to organ damage/dysfunction. Increased capillary permeability causes oedema due to fluid shift and result in hypovolemic shock.

Cytotoxic

Snake venom has cytolytic properties, which causes local necrosis and secondary infection, result in sepsis and death.

First aid management of snake bite

- Don't be panic, make the victim to be calm and donot allow the victim to walk.
- Immobilize the affected limb above/at the heart level.
- Wash the wound with soap and water/normal saline.
- Seek immediate medical help.

- Cut opening the wound, sucking out the blood or tourniquating the affected site, using cold compress are not recommended.

Management of Snake bites

Anti snake venom (asv) is used to treat snake bite. ASV is composed of antibodies and recommended only if there is significant toxicity or high risk of toxicity. Antivenoms are monovalent (effective against a single species' venom) or polyvalent (effective against a range of species).

How can you prevent a snake bite from happening?

Depending on where you live (or choose to vacation), you may or may not have a hard time avoiding snakes. But if you're going to be in snake territory, there are some useful tips to avoid getting bitten:

- Always be careful where you put your hands and feet. Don't reach into unknown spaces and holes, or underneath objects without first being sure a snake isn't hiding underneath.
- Don't lie down or sit down in areas where there might be snakes.
- Wear high-top leather boots when walking through or working in areas with dense vegetation.
- Do not attempt to capture, handle or keep venomous snakes.
- If you're going camping, take extra care around swamps and other places where snakes typically live.
- If you come across a snake, slowly back away from it and avoid touching.

Conclusion

Snake bites can be fatal if immediate measures are not taken to rescue the child and seek medical attention, prevention is even more important and therefore parents need to be taught about the preventive measures and early medical interventions to save the lives of children Nurses in the hospital and communities need to be proactive in educating parents and the community. regarin.

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