

Snakebite



Learning agenda

- Introduction
- Epidemiology of snake-bite
- Identifying venomous snakes
- Signs & symptoms
- Diagnosis
- First aid
- Prognosis assesment

- Specific treatment by anti snake venom therapy
- Supportive therapy
- Treatment of the bitten part
- Rehabilitation
- Prevention of snake bites
- Summary
- References

Introduction

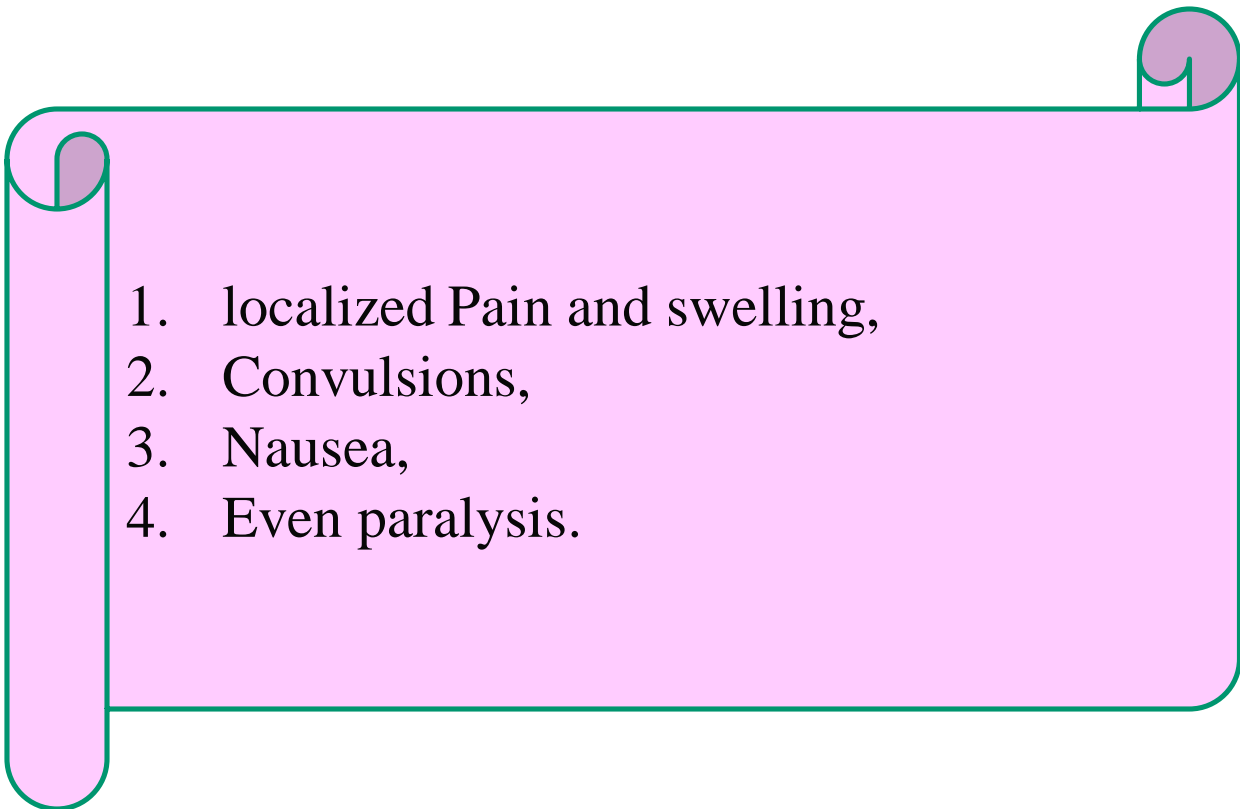


All snake bites are not fatal.

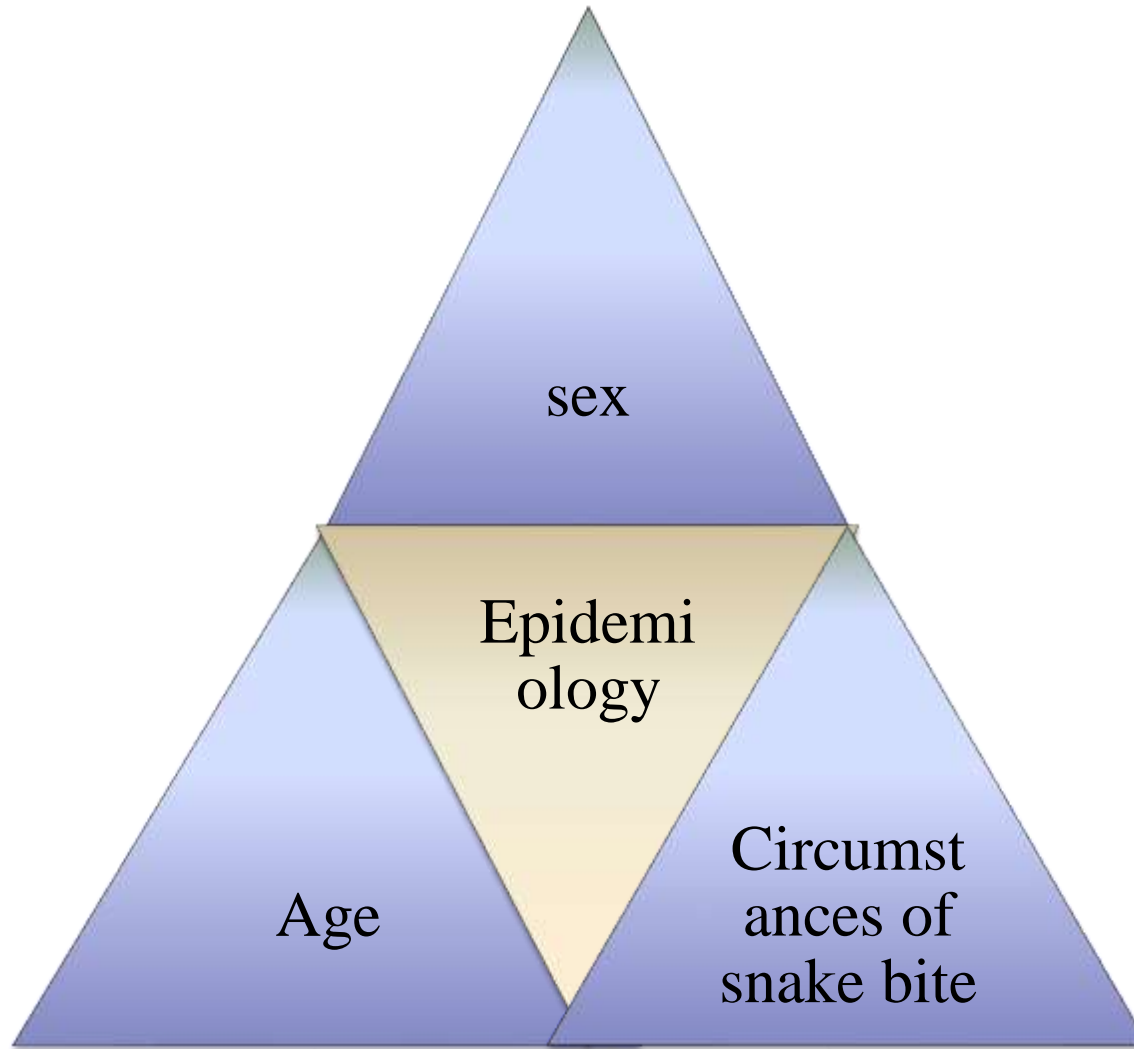
Only a small quantity of venom may be fatal.

Most people die from fear & venom is not the point of consideration.

- Venomous snake bites can produce an array of symptoms including :

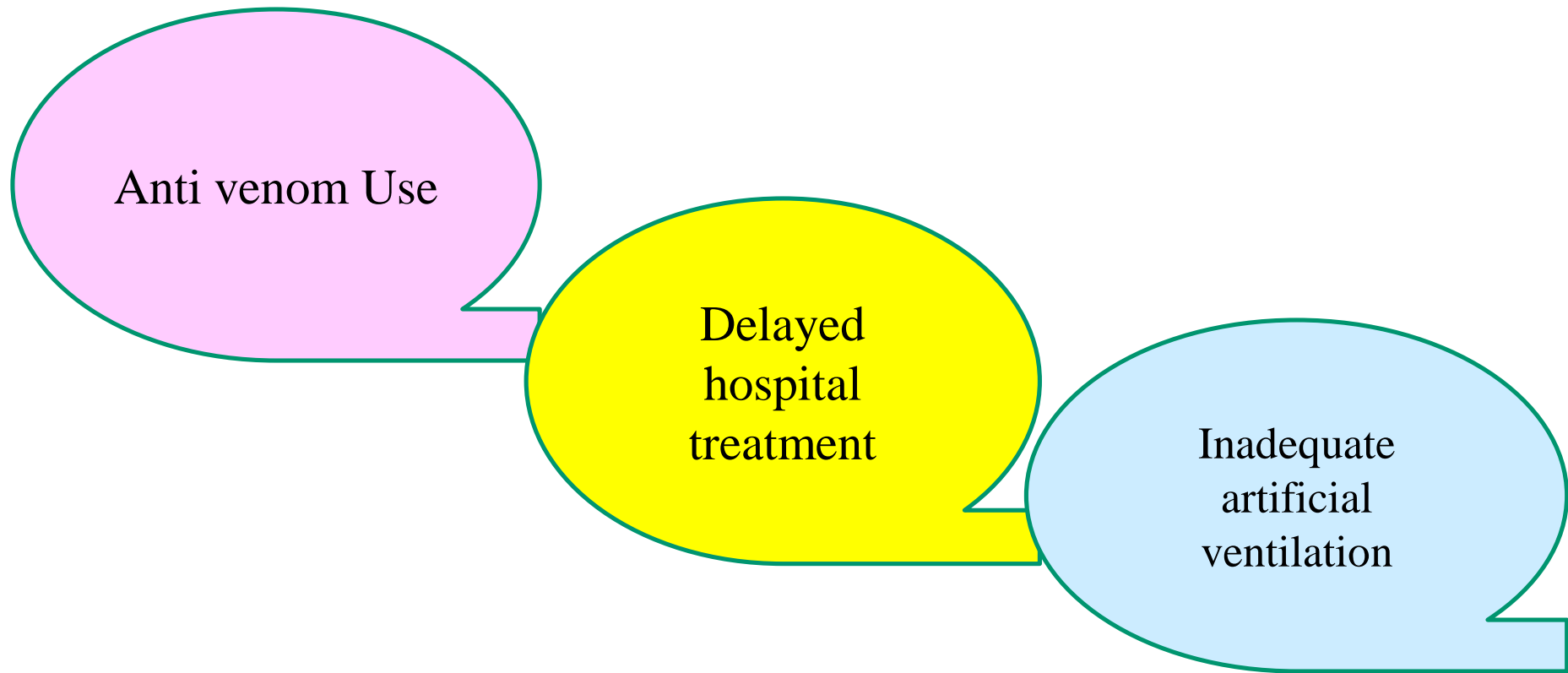
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1. localized Pain and swelling,
 2. Convulsions,
 3. Nausea,
 4. Even paralysis.

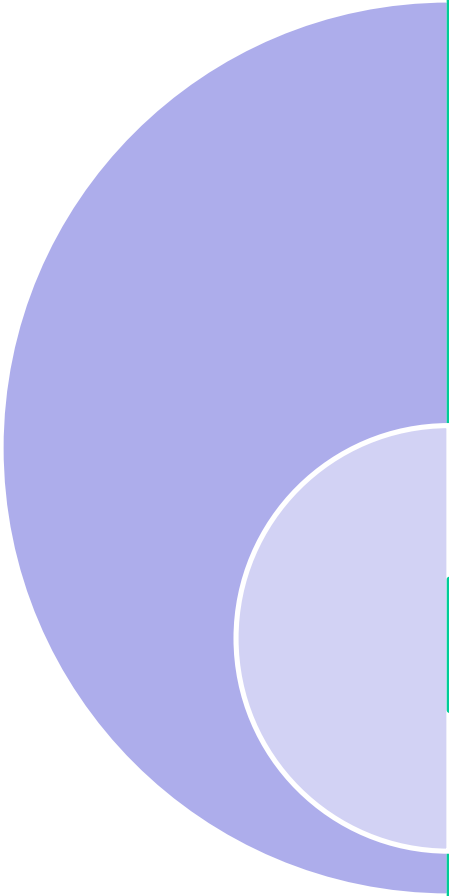
Epidemiology



Death from snake-bite

Factors identified as contributing to a fatal outcome included;





If unfamiliar with the different types of snakes and unable to distinguish between venomous and non-venomous ones, it can be difficult to know how to respond in the event of a bite.

Always treat a snake bite as if it's venomous.

Identifying venous snakes

- To identify a snake bite, consider the following general symptoms:

Two puncture wounds

Swelling and redness around the wounds

Pain at the bite site

Difficulty breathing

Sweating and salivating

Contind....

Numbness in the face and limbs

Vomiting and nausea

Blurred vision

signs & symptoms

Immediate signs & symptoms ;

- ❖ Severe pain
- ❖ Drooping eyelids
- ❖ Low blood pressure
- ❖ Thirst
- ❖ Tiredness or muscle weakness

- Local symptoms and signs in the bitten part :

Fang marks

Local pain

Local bleeding Lymph node enlargement

Inflammation (swelling, redness, heat)

Blistering

Bruising

Local infection, abscess formation

Necrosis

Diagnosis



- One or more punctures
- A small abrasion & a linear laceration



- Local swelling



- Respiratory symptoms
- Paralysis

First aid



Move away from the rattlesnake



Lay the patient down & Give him complete rest



Calm & reassure him



Do not make him to walk



Immobilize the affected limb & gently wash the wound with normal saline

First aid



Excision of the bitten area is a dubious practice , particularly if the area is on a limb



Treat shock



Resuscitation if there is a breathing difficulty



Shift the patient hospital immediately



Take a killed snake , if available for identification



Do NOT maneuver the area above the heart.

If you place the area above the heart, the blood containing venom from the bite will go to the heart more quickly.

Treating the bite

Remove clothing and jewellery

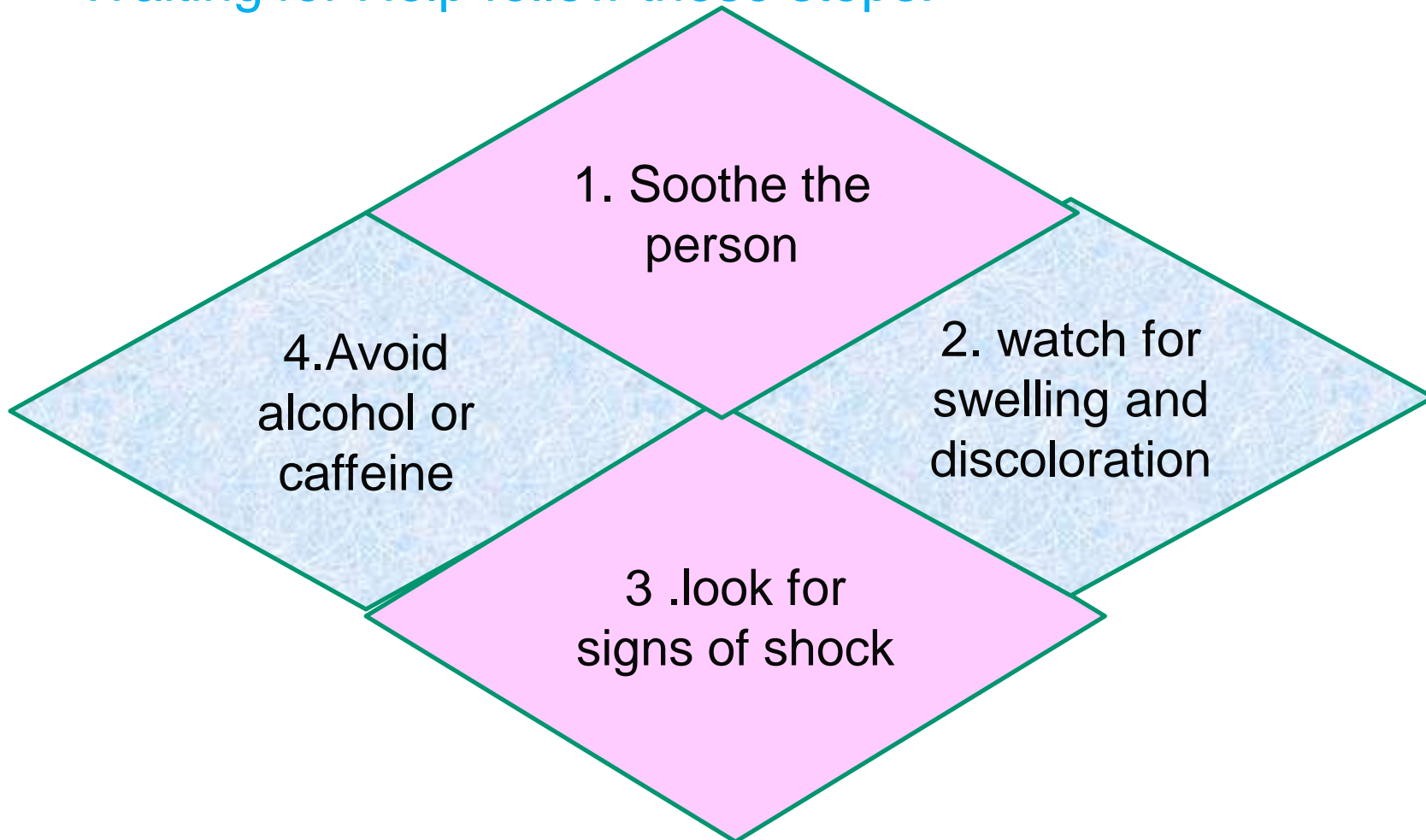
Let the wound bleed

Use a pump suction device

Place a clean bandage on the
wound

Tie a splint or sling around the
limb

- Waiting for Help follow these steps:

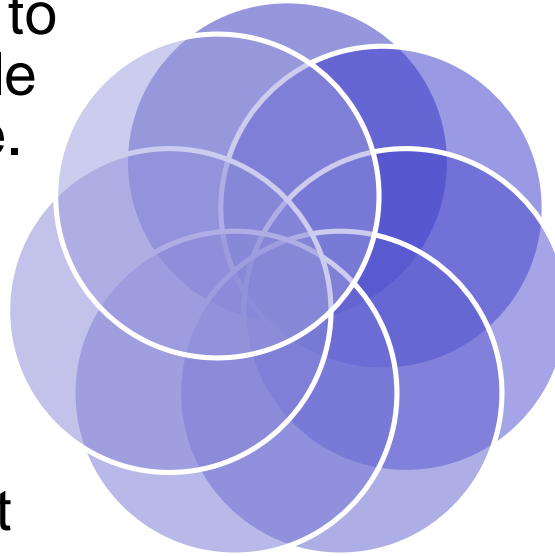


Knowing What to Avoid

6 Don't give the person anything to eat or drink while waiting for care.

5 Don't pee on the bite

4 Don't apply ice or immerse the wound in water.

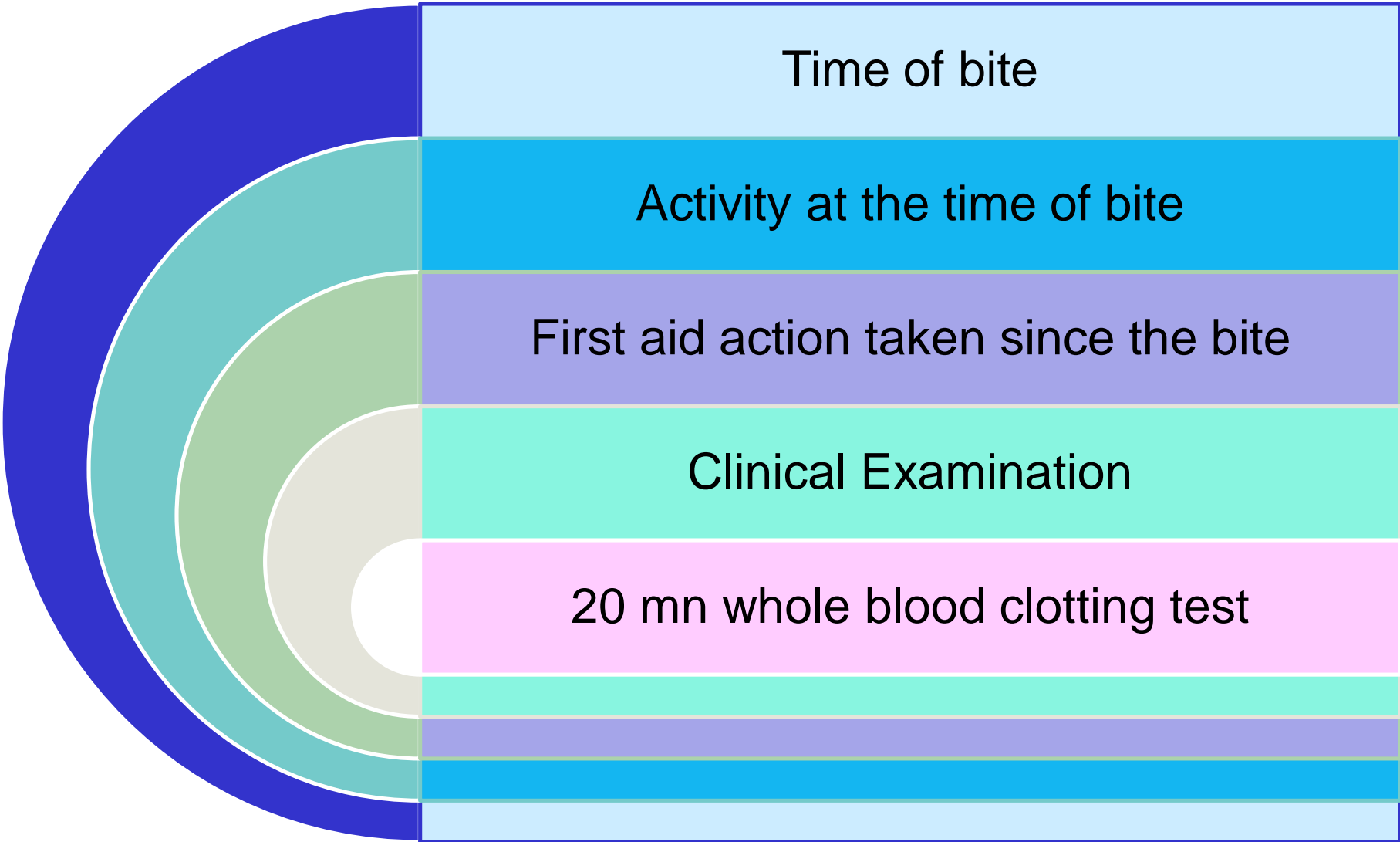


1 .Don't cut the wound

2 Don't suck the wound with your mouth

3 Don't apply a tourniquet

Prognosis Assessment



Specific treatment Anti snake Venom

Indication for ASV

Spontaneous systemic bleeding

Whole Blood Clotting Time > 20 min

Thrombocytopenia (platelet < 1 lac)

Shock, Paralysis, ARF, Rhabdomyolysis, Hyperkalemia.

Local swelling involving > ½ of bitten limb

Rapid extension of swelling

Contind.....

Ideally administer within 4 hr but effective if given within 24 hrs

In mild cases-5 vial (50 ml)

In moderate cases-5 to 10 vial

In severe cases-10 to 20 vial

- **Disadvantage of ASV:**

- Pain at injection site
- Hematoma formation
- Increase intra compartmental pressure

- **ASV SENSITIVITY IS NOT RECOMMENDED NOW A
DAYS**

Adverse reaction of ASV

Early anaphylactic reaction

- Seen with in 10 min to 3 hrs
- Urticaria,
- Diarrhoea,
- Tachycardia,
- Fever,
- Hypotension, etc.

Late serum sickness

- 1-12 days
- Fever,
- Nausea&vomiting,
- Diarrhoea,
- Artheritis,
- Nephritis
- Myoglobinuria.Etc.

Supportive therapy



For coagulopathy - if not
reverse after ASV therapy

Fresh frozen plasma

Cryoprecipitate
(fibrinogen, factor VIII),

Fresh whole blood,

Platelet concentrate.

Treatment of the bitten part

Bitten part Should be nursed in the Most comfortable position

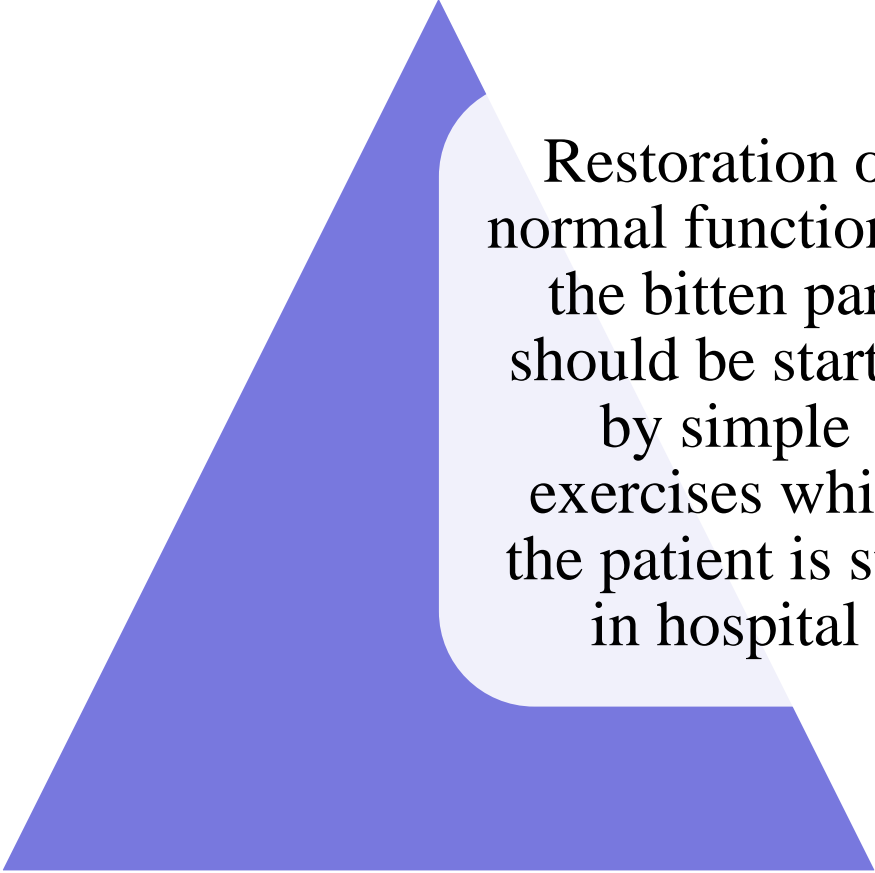
Bullae may be large and tense but they Should be aspirated only if they seem likely to rupture.

Use of immediate broad spectrum antibiotics.

Compartmental
syndromes and
fasciotomy



Rehabilitation



Restoration of normal function in the bitten part should be started by simple exercises while the patient is still in hospital

Prevention

Snake bites
can be
prevented in
many cases.

It's best to
refrain from
approaching or
handling
snakes in the
wild.



Avoid typical places where snakes like to hide, such as patches of tall grass and piled leaves, and rock and woodpiles.

If you encounter a snake, give it space to retreat and let it take cover.



It's in the snake's nature to avoid interaction
When working outside where snakes may be present, wear tall boots, long pants, and leather gloves.



When in the wilderness,
treading heavily creates
ground vibrations and noise,
which will often cause snakes
to flee from the area.



The use of a flashlight when engaged in camping activities, such as gathering firewood at night, can be helpful.

Snakes may also be unusually active during especially warm nights.



Summary

- It is clear that snake-bite is an important medical emergency and cause of hospital admission.
- It results in the death or chronic disability of many active younger people, Especially those involved in farming and plantation work.
- However, the true scale of mortality and acute and chronic morbidity from snake-bite Remains uncertain.

References

- Anker RL, straffonwg, loiselle DS, anker KM. Retarding the uptake of “mock venom” in humans: comparison of three first-aid treatments. *Med J aust.* 1982 mar 6; 1(5): 212-4.
- Ariaratnam ca et al. Distinctive epidemiologic and clinical features of common krait (*bungarus caeruleus*) bites in sri lanka. *Am J trop med hyg.* 2008; 79: 458-62.
- Ariaratnam ca et al. Frequent and potentially fatal envenoming by hump-nosed pit vipers (*hypnale hypnale* and *H. Nepa*) in sri lanka: lack of effective antivenom.

- *Trans R soc trop med hyg. 2008; 102: 1120-6.*
- Ariaratnam ca. Syndromic approach to treatment of snake bite in sri lanka based on results of a prospective national hospital-based survey of patients envenomed by identified snakes.
- *Am j trop med hyg. 2009 oct; 81(4): 725-31.*
- Banerji rn, sahani al, chacko ka. Neostigmine in the treatment of elapidae bites. *J assoc physicians india. 1972; 20: 503-9.*

MCQS

1. Don't suck the snake poison with mouth even if there is no injury or ulcer in the mouth.

T or F

2. Apply the first aid measures preferably within the ten minutes of the snake bite. T or F

3. What should you do for a snake bite?

A.) Keep victim calm,

B) put constriction band and ice on bite,

C) keep bite below heart,

D) all the above

4. If someone is bitten by a snake and you can't get help right away, what first aid can you give?
- A. Keep the bite below the level of the heart
 - B. Clean the area with soap and water
 - C. Cover the area with a clean dressing
 - D. All of the above

5. If someone is bitten by a snake and you can't get help right away, what first aid can you give?

A. Keep the bite below the level of the heart

B. Clean the area with soap and water

C. Cover the area with a clean dressing

D. All of the above

6. Which of these areas are places where snakes are often found?

A. High grass

B. Piles of leaves

C. In rocks or piles of wood

D. None of the above

7. First aid for snakebite should include which of the following?

A. Avoid unnecessary activity and try to immobilize the part of the body that was bitten

B. Call 108 or emergency services

C. Try to remain calm

D. All of the above

8. What can you do to lower your risk for being bitten?
- A. Catch any snakes you see on a hike and move them off the trail
 - B. Kill any snakes you see on a hike
 - C. Wear thick leather boots when hiking through tall grass
 - D. None of the above

9. If a person gets bitten on the finger by a snake, how far up the arm should a pressure immobilization bandage be applied?

- A) To the forearm
- B) To the elbow
- C) To the wrist
- D) As far up the limb as possible