FIRST AID FOR SNAKEBITE

By: Dr. Struan K. Sutherland, Head Immunology Research, Commonwealth Serum Laboratories, 45 Poplar Road, Parkville, 3052, Victoria, Australia.

Recent research has shown that very little venom reaches the blood stream if firm pressure is applied over the bitten area and the limb is immobilized.

Therefore rational first aid is:

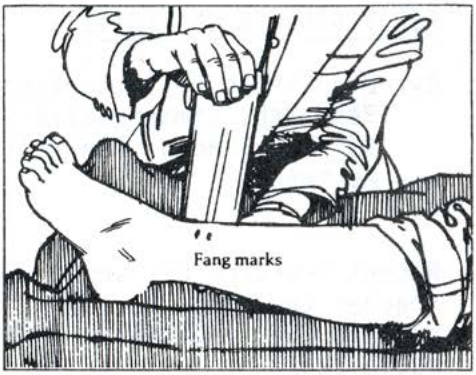
1. Immediately apply a broad firm bandage around the limb and on the bitten area. It should be as tight as one would bind a sprained ankle. As much of the limb should be bandaged as possible. Crepe bandages are ideal but any flexible material can be used, e.g. tear up clothing or old towels into strips.
2. Keep the limb as still as possible. Bind some type of splint to the limb - e.g. piece of timber, spade, any rigid object.
3. Bring transport to the victim whenever possible.
4. Leave the bandages and splint on until medical care is reached.

Don't cut or excise the bitten area.

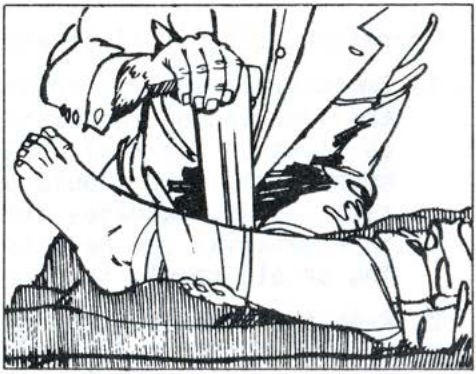
Don't apply an arterial tourniquet.

The following diagrams show the recommended first aid procedure for snakebite of the lower limb:

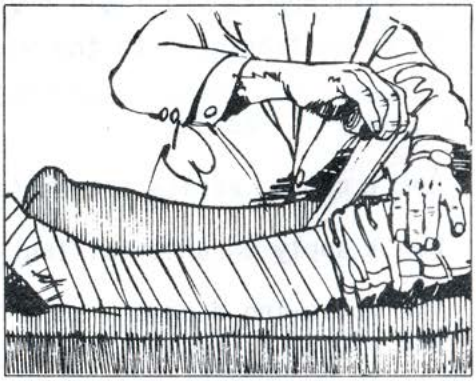
1. Apply a broad pressure bandage over the bite site as soon as possible (don't take off jeans, as the movement of doing so will assist venom to enter the blood stream. Keep the bitten leg still).



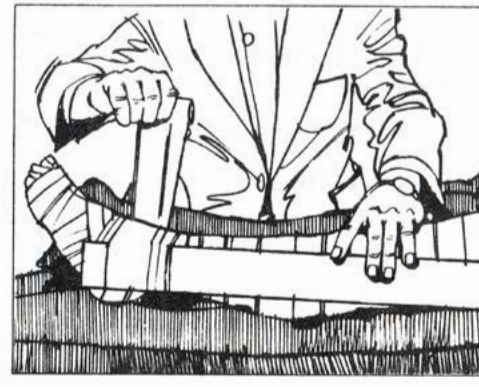
2. The bandage should be as tight as you would apply to a sprained ankle.



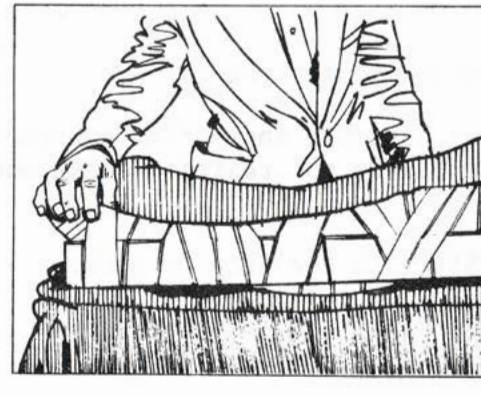
3. Extend the bandages as hight as possible.
The bandages have to be applied distally first and then wound up the limb.



4. Apply a splint to the leg.



5. Bind it firmly to as much of the leg as possible.



If the bandages and splint have been applied correctly, they will be comfortable and may be left on for several hours.

They should not be taken off until the patient has reached medical care. The doctor will decide when to remove the bandages.

If venom has been injected it will move into the blood stream very quickly when the bandages are removed. The doctor should leave it in position until he or she has assembled appropriate anti-venom and drugs which may have to be used when the dressings and splint are removed.

Bites on hand or forearm:

1. Bind to elbow with bandages.
2. Use splint to elbow.
3. Use sling.



Bites to the trunk:

If possible apply firm pressure over the bitten area. Do not restrict chest movement.

Bites to the head or neck:

No first aid for bitten area.

Even if the bitten person is ill when first seen, the application of the pressure immobilization first aid in the cases recommended will prevent further movement of venom from the bitten limb.

Finally, how the crepe bandage procedure retards venom movement is still a matter of speculation. The early studies indicated that pressure alone was unsuitable for venom immobilization. A combination of pressure and immobilization is required for successful first aid. Other methods such as air splints or "venous tourniquets" were moderately effective only when combined with a

general anaesthesia.
Possibly the mechanical emptying of superficial vessels by the application of crepe bandages plays a significant role. Because of this possibility, it is recommended that the bandages be applied distally first and then wound up the limb, though this will push some venom centrally.

If we consider venom being introduced as an avascular "blob", then to move centrally at any speed it must travel in a tube filled with liquid. Emptying and compressing both the capillaries and the lymphatics in its area retards this process, and good immobilization also slows lymph production.
Whatever the mechanism, it appears complex and involves both lymphatics and capillaries.

REFERENCES

Sutherland, S.K., 1981. When do you remove first aid measures from an envenomed limb? Med. J. Aust., 1981 (1): 542-544.

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