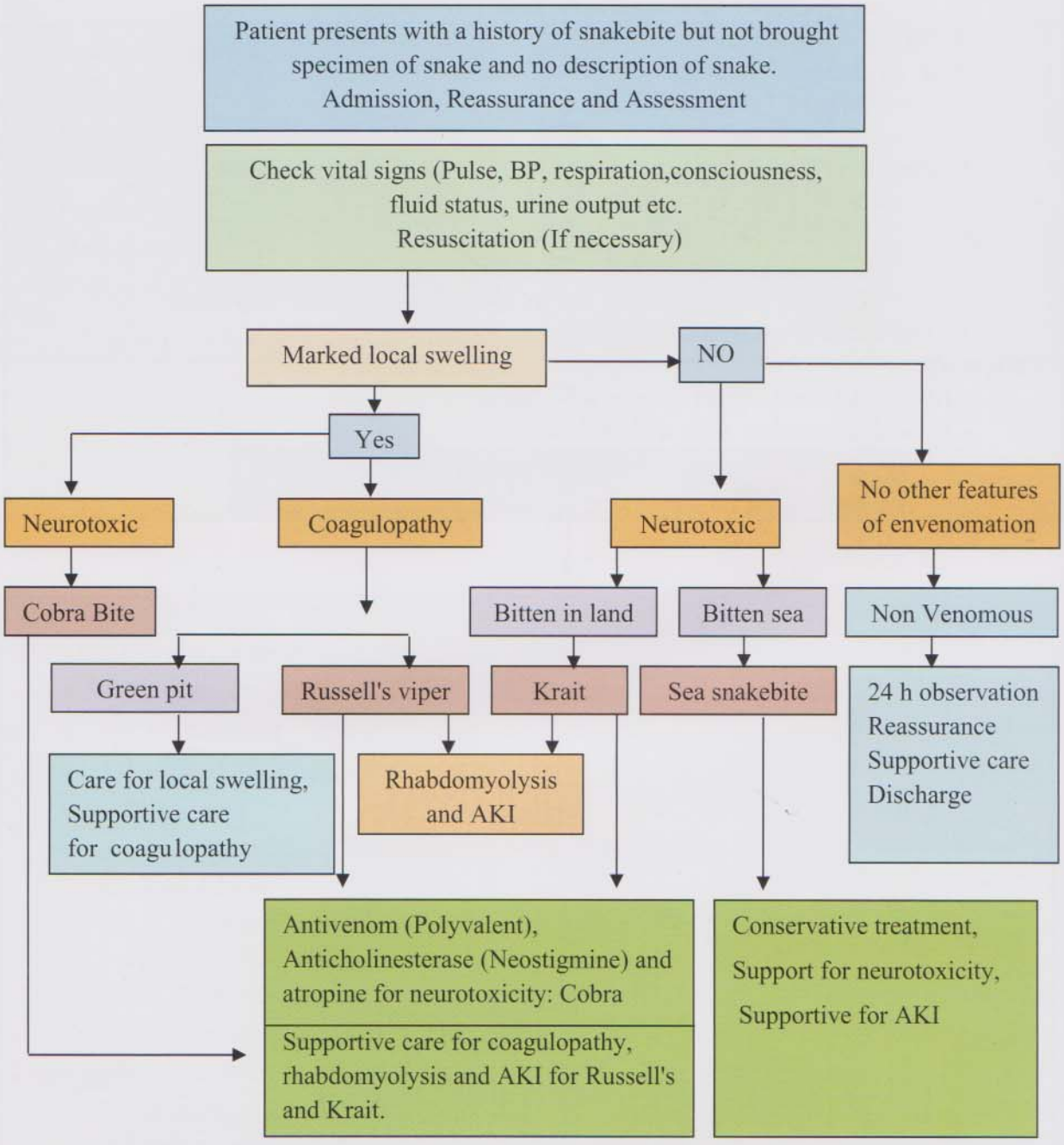
SSK

Clinical Management Protocols

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Snakebite

Approach to identification of common snakebite patients of Bangladesh by clinical syndrome and treatment principle



- **The above clinical syndrome is applied for all areas of Bangladesh**
- **Russell's viper is more common in northern area (Rajshahi, Chapainobabgonj etc).**

Identify the snake by brought specimen, description or by photograph. Identified as venomous, non-venomous, snake not identified, suspected snakebite, treat accordingly.

Antivenom Therapy: If Systemic Envenoming or Local Envenoming

Indications for antivenom (AV): AV treatment is recommended if and when a patient with proven or suspected snakebite develops one or more of the following signs.

Indications of AV therapy		
Systemic signs	Clinical	Laboratory
Haemostatic	Spontaneous systemic bleeding	20 WBCT Prothrombin time, Thrombocytopenia (<100 x 10^9/litre or 100000/cu mm)
Neurotoxic signs	Ptosis, external ophthalmoplegia, paralysis etc	
Cardiovascular abnormalities	Hypotension, shock, cardiac arrhythmia	Abnormal ECG
Acute kidney injury (renal failure)	Oliguria/anuria	Rising S. creatinine / urea
Haemoglobinuria/ myoglobinuria	Dark brown urine, muscle aches and pains (features of generalized rhabdomyolysis)	Urine dipsticks, Hyperkalemia Low Hemoglobin/ Haematocrit
Local envenoming		
Local swelling involving more than half of the bitten limb (in the absence of a tourniquet) within 48 hours of the bite. Swelling after bites on the digits (toes and especially fingers). Rapid extension of swelling (for example, beyond the wrist or ankle within a few hours of bite on the hands or feet). Development of an enlarged tender lymph node draining the bitten limb		

It is never too late to give AV provided the indications are present: Only if features of **systemic** envenoming are present for bites of snakes mentioned in the above box
Do not give AV for local envenoming alone, except for Cobra and Russell's viper bites when indicated.
Commence AV immediately if indicated for the bites of: Cobra, Krait, Russell's viper
Currently available AV is not recommended for the bites of: Green pit viper, Sea snake

- Dose: 100 ml (10 amp/vials) of polyvalent AV mixed with 100 ml of normal saline should be infused intravenously over one hour.
- Start infusion at a lower rate, monitor for 10-15 minutes.

Adult and children should receive same dose of AV

Before initiating AV, prophylactic subcutaneous adrenaline (dose - adult 0.25 ml of 0.1% solution and in children 0.005 mg/kg) should be given to the victim.
Adrenaline is available as 0.1% (1 in 1000) solution, 1 ampoule containing 1 ml.
Draw adrenaline in an Insulin syringe (100 unit) upto mark 25 (for adult), administer Subcutaneously (in case of premedication).
For treatment of anaphylaxis, draw 0.5 ml of adrenaline (for adult) & give IM.

CAUTION: Have Adrenaline (+Inj. Hydrocortisone, Inj. Anti histamine) available at bedside.
Observe the patient carefully during the time of administration of antivenom and upto 3 hours for signs of anaphylaxis.

Antivenom reaction is not uncommon but rarely fatal. Appropriate timely management of AV reaction.

Antivenom reaction

Early reaction | **Late reaction**

Anaphylactic reaction
(Develop within 10-180 min)

Clinical features:
- Urticaria, itching, fever
- Palpitation, vomiting,
- Dry cough
- Abdominal pain, diarrhoea
- Severe anaphylaxis: Hypotension bronchospasm angioedema

Management
Stop antivenom
Inj. Adrenaline (0.5 ml for adults and 0.01 mg/kg body weight for children.)
Inj. Chloropheniramine maleate adults 10 mg, children 0.2 mg/kg by intravenous injection over a few minutes)
Inj. Hydrocortisone (100 mg) children 2 mg/kg

Pyrogenic reaction
(Develop within 1 to 2 hour)

Clinical features:
- Fever, chills (rigors)
- Vasodilation
- Fall in blood pressure

Management:
Stop antivenom
Paracetamol suppository

Serum sickness
(Occurs within 1-12 days)

Clinical features:
- Fever, nausea, vomiting, diarrhoea
- Itching, recurrent urticaria
- Arthralgia, myalgia, periarticular swelling
- Lymphadenopathy,
- Mononeuritis multiplex,
- Proteinuria
- Encephalopathy

Management:
Oral Prednisolone adults 5 mg six hourly, children 0.7 mg/kg/day and Chlorophenramine adults 2 mg six hourly, children 0.25 mg/kg /day in divided doses.

The dose can be repeated every 5-10 minutes if the reaction persists or the symptom worsens.

Anaphylaxis unresponsive to I/M Inj. Adrenaline
I/V 0.9% Normal saline
I/V Inj. Adrenaline Infusion
I/V Inj. Dopamine Infusion

When Inj. Adrenaline should not be given:
- Hypertension
- Cardiac diseases
- H/O Cerebrovascular disease
- Coagulopathy