

# Management of snake bites in children in Sri Lanka

**Sri Lankan College of Paediatricians**

# Objectives

- **Discuss the patterns of envenomation**
- **Discuss the structured approach to the management of snake bites**
- **Identify the venomous snakes in Sri Lanka**

# Case

- 12 year old child sleeping on a mat on floor
- Went to sleep well previous night
- Got up at 4am with abdominal pain
- Given home remedy
- Started vomiting at 6am

# ***STEPS IN THE MANAGEMENT***

- **Relive anxiety**
- **ABCD**
- **Antivenom administration**
- **Managing anaphylactic reactions**

# PELS Approach

## “The Blueprint”

- Triage
- Initial Stabilisation
  - Position
  - Airway
  - Breathing
  - Circulation
  - Disability
  - Measurement
  - Monitoring
  - Reassess
- Directed History and Examination and Ix –
  - Reassess
- Commence Specific Treatment
- Ongoing Care

# Directed History & Examination

## ASK ABOUT

### Event

- Previously normal
- Slept on the floor

### Symptoms

- Abdominal pain
- Vomiting

### Past history

- Similar incidences in their locality

# Examination

- Flange marks on the right ankle
- Little oozing of blood

# INITIAL INVESTIGATIONS

## Blood tests

- RBS
- Coagulopathy Ix
  - Whole Blood Clotting Time (WBCT)
  - Coagulation profile (PT, INR)
- FBC
  - Polymorphoneuclear leucocytosis
- Renal – Urea/Creatinine/Serum Electrolytes
- LFT – SGPT/SGOT

- **Urinalysis** – negative for blood
- **ECG**



# Sri Lanka Venomous snakes

Antivenin is indicated **only** for

- Cobra
- Krait
- Russell's viper
- Saw scaled viper

# Antivenin has **no benefit for**

- Hump nosed viper
- Green pit viper
- Sea snakes

# Sri Lanka polyvalent antivenin is indicated **only** for

- **Witnessed bite + first symptom**
- **Evidence of systemic envenomation**

# EARLY NON SPECIFIC FEATURES

- **Nausea / Vomiting -**
- **Back ache & Abdominal pain**
- **Neutrophilia**

# COBRA

- **Systemic**
  - **Neuropathy- Predominant**
  - **Coagulopathy**
- 
- **Severe Local envenomation**
  - **Swelling with redness and pain**
  - **Blistering**
  - **Necrosis**



# Russell's viper (බිත් පොළඟා)

- **Systemic manifestations**
- **Coagulopathy- Predominant**
- **Neuropathy**
- **Renal**



- **Severe Local envenomation**
- **Swelling with redness and pain**
- **Blistering**
- **Necrosis**

# Sri lankan crait

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- **Neuropathy –**
- **Respiratory failure**



# Common crait

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- **Neuropathy –**
- **Respiratory failure**



# Saw scaled viper

(වැලි පොළඟා)



# Pre-hospital management (First aid)

- Reassurance
- Wash and clean the area
- Minimum mobilization
- **No tourniquet**
- Analgesia with – PCM ( No NSAID)
- **Remove rings/ anklets**

# Hospital Management

- **Blue print**
- **Triage / Position / ABCD**
- **Assessment of Envenomation**
- **Specific Management – Indication for Antivenom**
- **Reassurance**

# Specific Treatment

- **Antivenom**
- **Indicated**
- **Precautions**
- **How many vials**
- **How fast**
- **Monitoring**

# ANTIVENIN PREPARATION

- Antivenin a total of 10 vials is given as a single dose for all ages.
- Each vial is reconstituted in 10 ml of Normal Saline.
- Minimize bubbling by avoiding shaking
- Further dilution depending on age and weight
- In older children the reconstituted antivenin can be further diluted to make total of 400 ml with normal saline.

# ANTIVENIN ADMINISTRATION

- In infants and small children this can be given directly with an infusion pump.
- First vial to be given over 15 min.
- Complete 10 vials in 1 hour
- Look for signs of anaphylaxis
- **Second 10 vials can be considered after 6hrs depending on the severity of the envenomation.**
- **More than 20 vials is not encouraged.**

# Administration of antivenin who already had allergic reaction

- Call for help
- A – B – C – D – E
- Adrenaline sub-cut
- Start antivenin
- Have IM adrenaline ready
- Close observation for allergic reactions





# Controversies and challenges

- Snake identification
- Non specific manifestations
- WBCT interpretation
- Repeat antivenin
- Multi-organ involvement +/-DIC mix with toxin manifestations
- Prolonged ventilation in Krait bites

Thank you