Snake Envenomations in The Middle East

Ziad Kazzi, MD
Barrak Aldosary, MD
Jane Terris, MD
Nadeem Al-Duaij, MD
Mohammed Al-Ehaidib, Pharm D

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The Problem

- Snake envenomation in the MENA region is poorly characterized
- Bites occur mostly in rural areas
- Most health care providers are not familiar with the management of snake bites
- Antivenom is hard to get
In The Next Hour

We will probably generate more questions than answers.
Venomous Snakes in Lebanon

Ziad Kazzi, MD, FAAEM
Assistant Professor of Emergency Medicine
International Toxicology Fellowship Director
Emory University
Georgia Poison Center
Macrovipera Lebetina Obtusa - Blunt Nosed Viper
Venom

- Heterogeneous group of proteins that interfere with coagulation, tissue repair and the normal hemostatic system
  - Phosphodiesterases
  - Lebetin (inhibit cell adhesion and platelet aggregation)
  - Lebecitin
  - Lebestatin
Clinical Toxicity

- Local burning pain
- Swelling and echymosis
Clinical Toxicity

- Hemorrhagic blisters
- Free bleeding from punctures
- Regional lymphadenopathy
- Systemic: Nausea, vomiting
Management

- Supportive
- Blood products
- Tetanus and wound cleansing
- Antivenom:
  - BEHR
  - TASH
  - PAST-ALG
  - IRAN
  - PAST
  - Egyptian Antivenom
Palestinian Viper
Range: Palestine, north through Lebanon and Syria, east through Jordan. Habitat: Rocky hillsides, overgrown with small brush, open woodland, agricultural areas, adjacent or close to rivers, streams and/or other water sources.
Size: 36 - 40 inches. The largest seldom exceed 4 feet.
Venom

- Composed of about 30 components, 16 of which were identified:
  - Proteases, haemorrhagins
Clinical Toxicity

- Local:
  - Swelling, hemorrhage and pain
  - Lymphadenopathy
- Hematological:
  - Thrombocytopenia, anemia, coagulopathy
- Systemic
  - Cardiac
  - GI
  - Neurologic
Table 5. Incidence of local and systemic signs

<table>
<thead>
<tr>
<th>Local signs</th>
<th>No.</th>
<th>%</th>
<th>Systemic signs</th>
<th>No.</th>
<th>%</th>
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<tr>
<td>None</td>
<td>0</td>
<td>0</td>
<td>none</td>
<td>42</td>
<td>49.4</td>
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<tr>
<td>Edema</td>
<td>82</td>
<td>96.4</td>
<td>abdominal pain vomiting and nausea</td>
<td>30</td>
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<tr>
<td>Pain</td>
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<td>hypotension</td>
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<td>Lymphadenop</td>
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<td>22.3</td>
<td>hypertension</td>
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<td>2.3</td>
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<tr>
<td>Erythema</td>
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<td>2.3</td>
<td>arrhythmias</td>
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<td>Hematoma</td>
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<td>3.5</td>
<td>anaphylaxis</td>
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<td>Cellulitis</td>
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<td>2.3</td>
<td>diarrhea</td>
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</tbody>
</table>
Management

- Admit: later relapse (recommendation of 72 hours)
- Supportive
- Blood products
- Tetanus and wound cleansing
- Antivenom
  - Reserved for systemic manifestations?
  - Dose may be based on severity of syndrome

ROGO “Palestine Viper”
Iran “Poly-specific”
Egyptian antivenom
Vipera Bornmuelleri
Lebanon Viper

- Found in Golan Heights, Lebanon and Syria
- Less than 75 cm in length
Clinical Toxicity

- Not documented
Bitis Arietans—Puff Adder
During the year 07 the Pharmacy was able to secure 20 vials from the Lebanese Ministry of Health.

The Pharmacy planned to distribute them free of charge.
Procurement

- The AUBMC Pharmacy used to get the venom antiserum from Saudi Arabia through one of the agents.
- Logistics in getting a drug which is not registered by the MOH
- Unexpected consumption
- High cost and low benefit
- Most of the purchased quantities were discarded as expired
- Last year the MOH 100 vials purchased from Syria
  - 95 vials used
Thank you