Assessing Leishmaniasis in East Pokot, Kenya: An Epidemiological Survey and Community Evaluation

Abstract

- While there is evidence that visceral leishmaniasis (VL) is prevalent in some parts of Kenya, its epidemiology and community knowledge, awareness and interactions is not well established.

- We conducted multiple surveys to determine the prevalence of VL and establish community knowledge, awareness and practices about the disease case control and management in East Pokot, Kenya.

Background

- WHO estimates that 12 million people are infected with cutaneous or visceral leishmaniasis (CL, VL) in 88 countries worldwide, with 90% of the 500,000 annual VL cases coming from six countries in Africa, Asia and Brazil.

- Transmitted through the bite of a female phlebotomine sandfly, leishmaniasis is world’s 2nd largest parasitic killer after malaria.

- Results in 90% fatality rate within 2 years if left untreated, killing much more quickly than AIDS.

- In Kenya VL is endemic in 22 hot arid and semi-arid regions with about 4,000 annual cases in children and young adults.

Methods

Cross-Sectional Survey

- Health Facility Survey: 8 facilities
- KAP Survey: 448 households in 18 cluster villages
- Systems Analysis: Interviews with 26 key informants
- Epidemiological Mapping: Used rK39 fields rapid test for leishmaniasis
  - 1,324 individuals tested
  - 597 DBS collected
- Medical Screening of and distribution of common drugs reached 855 patients

Rk39 Results

- Average age: 25.28 (SD 18.46)
- 778 (58.76%) Male; 546 (41.24%) Female
- 23 rK39 positive (1.74 CI, 1.10 - 2.60) cases per 100 persons
- Follow up: 8 treated; 1 deceased
- 2 tested negative

Results

Common Infectious Diseases

Veterinary

NTDs in Kenya, some knowns

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>0.05%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trachoma</td>
<td>0.01%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onchocerciasis</td>
<td>0.0000%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leprosy</td>
<td>0.0000%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Facility survey

Screening/education results

- 855 received common drugs
- 200 posters and 350 flyers distributed
- 94% had VL awareness
- 23% knew cause of disease
- 20% recognized sandfly vector
- 21% knew about traditional treatments

Lessons / Challenges

- Overwhelming turnout, multiple tests run out
- Many community members brought the sick expecting treatment for other ailments like malaria and typhoid.
- Distribution of relief food as well as market days coincided with the screening days; food and markets were given first priority.
- Security concerns prevented us to go to 2 villages; these were replaced.
- Those tested expected immediate treatment; we gave referral card to nearest HC at Kimale, a 3-day walk

Conclusion

- This is the first study to simultaneously estimate the prevalence of VL and assess the knowledge, awareness and community practices as well as survey facilities and systems in response to the disease in the District.
- There is need to develop an effective program to control significant levels of VL and other infectious diseases in this hard-to-reach population using community strategies.
- With additional funding plans for the next 2 years are to build a strong community response in East Pokot and to establish a resource center / research site based at Chemolingot District Hospital.