Schistosomiasis Outbreak, Kwite village, Mangwe district, Zimbabwe

P.T. Chimberengwa¹, N. Masuka², N.T. Gombe¹

¹: Zimbabwe Field Epidemiology Training Programme, University of Zimbabwe, Department of Community Medicine
²: Provincial Medical Director, Matabeleland North Province, Ministry of Health and Child Welfare, Zimbabwe

Introduction

- Schistosomiasis is a neglected tropical disease
- Second most prevalent tropical disease after malaria.
- Among the top 10 causes of OPD cases at Empandeni RHC
- A new school health master received complaints of pupils passing bloody urine.
- Teacher accompanied 31 symptomatic pupils to Empandeni RHC on 20/06/12 for treatment

Study site

Objectives

Broad Objective
- To investigate Schistosomiasis outbreak at Kwite Primary School, Mangwe District June 2012.

Specific Objectives
- To describe the schistosomiasis outbreak by person, place and time.
- To determine factors associated with contracting schistosomiasis.
- To identify the source of infection.
- To assess case management of schistosomiasis.
- To assess knowledge and practices among pupils on schistosomiasis prevention and treatment.
- To conduct an environmental assessment.
- To evaluate the district outbreak preparedness and response

Methods

Study type
- Unmatched 1:2 case control study

Recruited 42 cases and 84 controls

Case: any person aged between 7 and 15 years attending Kwite primary school, resident in Empandeni Ward for not less than 2 months, who had passed bloody urine with or without associated symptoms between 1 June 2012 to 7 July 2012.

Data collection
- questionnaires, checklists

Data Analysis:
- Epi Info 3.5.2 used to generate tables, graphs and frequencies

Results

- 60% of cases were females
- The median age for cases and controls was 10 years (Q1=9, Q3=12) and (Q1=8, Q3=11) respectively.
- Schistosoma hematobium was isolated in 31 out of 100 urine specimens examined.

Factors independently Associated with Contracting Schistosomiasis at Kwite Village, June 2012

<table>
<thead>
<tr>
<th>Factor</th>
<th>Adjusted OR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swimming in dam</td>
<td>9.017 (2.29-35.53)</td>
<td>0.0017</td>
</tr>
<tr>
<td>Bathing in dam</td>
<td>3.221 (1.10-9.41)</td>
<td>0.0326</td>
</tr>
</tbody>
</table>

- Gardening, brick moulding, swimming & fishing were common activities at the dam
- Bulinus globosus snails were identified at Kwite dam

Discussion

- Kwite dam was contaminated with Schistosoma hematobium whose intermediate host Bulinus sp. was isolated in dam water.
- Human activities involving water contact (bathing & swimming) predisposed pupils to infection.
- Health education needs to be complemented by IEC materials

Conclusion

- The outbreak was driven by human contact with Schistosoma hematobium infested Kwite dam water and poor knowledge.

Recommendations

- Train rural health centre staff on IDSR - DMO
- Conduct formal training of school health master on health issues – DMO & DEO
- Conduct biannual snail scooping at Kwite dam - DEHO
- Conduct weekly health talks on assembly – School health master

Public Health Actions Taken

- Mollusciding done at Kwite dam
- Three boreholes in Kwite were repaired
- Health education IEC materials were prepared and distributed in the community
- School Health master oriented on Schistosomiasis

Limitations

- Date of onset of symptoms was difficult to establish and thus an epidemic curve could not be produced.

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