Sample survey of intestinal helminthiasis in the valley of Surkhet.

Dr. Hem N. Shakya

1. In Ward No. 5, 6, 7, 8 & 9 of Birendra Nagar (Previously known as Katkuwa Village Panchayat);

1:1. Location:--
Ward Nos. 5, 6, 7, 8 & 9 of Birendra Nagar form the North-western part of Surkhet Valley. Before their assimilation in Birendra Nagar, they used to form the Katkuwa village panchayat. The main market-place and government-offices thrive there since the year 2024 B. S. Total population of this locality, i.e., Katkuwa village panchayat, according to the census held in 2028 B. S. is 3362. Its landscape is both plain and hilly.

1:2. Sample Survey:--
A one-sample microscope examination of stool of the patients coming from Katkuwa V. P. (which, now, is ward Nos. 5, 6, 7, 8 & 9 of Birendra Nagar) to the Out-patient Department of Surkhet Hospital was done in the 6th month of the year 2033 B. S. Samples from 205 patients were examined.

1:3. Collection and Examination of Samples:--
One-sample-of-stool—a-person were collected in a clean & empty injection-vials. Centrifuging of specimens were done. Stool-slides were prepared with normal saline in the Out-patient Department laboratory. Cover-slips were applied & microscopic examinations done.

*M. B. B. S; D. T. M. & H. (Dac.)
### Results:

<table>
<thead>
<tr>
<th>Agegroup (in yrs.)</th>
<th>Total Population</th>
<th>No. of Specimens examined</th>
<th>Helminth Positive specimens (+)</th>
<th>Helminth Negative specimens (—)</th>
<th>A.L. Ova</th>
<th>A.D. Ova</th>
<th>A.T. Ova</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>Total Population of Katkuwa V. Panchayat, according to 2028 B.S. Census was 3362.</td>
<td>37</td>
<td>12</td>
<td>25</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6-14</td>
<td></td>
<td>29</td>
<td>20</td>
<td>9</td>
<td>6</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>15-50</td>
<td></td>
<td>131</td>
<td>87</td>
<td>44</td>
<td>25</td>
<td>60</td>
<td>14</td>
</tr>
<tr>
<td>51-over</td>
<td></td>
<td>8</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>205</td>
<td>121</td>
<td>84</td>
<td>38</td>
<td>76</td>
<td>21</td>
</tr>
<tr>
<td><strong>IN PERCENTAGE</strong></td>
<td></td>
<td>59.1</td>
<td>40.9</td>
<td>18.5</td>
<td>37</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>


* Some specimens were positive in more than one ova of helminths.
2. In Kisangang Village of Ward No. 7 of Uttarganga
Village Panchayat :-

2:1. Location :-

Uttarganga village panchayat forms the South-eastern part of the valley of Surkhet and Kisangang is a small village in the ward no. 7 of this village panchayat. There are 13 houses with 25 families in this village and the Total population is 117. Of that 77.8% are of Tharu community. They live in thatched huts and drink water from one common natural spring. They go into near-by jungles or rivulets for defecation. All of them are peasants.

2:2. Sample-Survey :-

A one-sample-microscopic-examination-of-stool of 74 persons of different age-groups were done in the 4th month of the year 2034 B. S. Haemoglobin estimation of these persons were also done with Sakh’s Haemoglobinometer.

2:3. Collection and Examination :-

One-sample-of-stool-a-person were collected in clean empty injection-vials. Blood-samples for haemoglobin estimation were taken from each of them. Centrifuging of stool-samples were not done. Stool-slides were prepared with normal-saline, coverslips were applied and microscopic examinations done. Haemoglobin estimations were done by Shhli’s Haemoglobinometer.

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### 2.4. Results:

<table>
<thead>
<tr>
<th>Age group</th>
<th>Total population (no.)</th>
<th>Specimens examined</th>
<th>Specimens positive (+)</th>
<th>Specimens negative (-)</th>
<th>A. L. = Ascaris lumbricoides</th>
<th>T. T. = Trichuris trichiura</th>
<th>H. nana = Hymenolepis nana</th>
<th>S. ster = Strongyloides stercoralis</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>25</td>
<td>16</td>
<td>5</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>6-14</td>
<td>27</td>
<td>16</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>15-50</td>
<td>60</td>
<td>37</td>
<td>5</td>
<td>28</td>
<td>13</td>
<td>11</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>51+</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>117</strong></td>
<td><strong>73</strong></td>
<td><strong>13</strong></td>
<td><strong>54</strong></td>
<td><strong>19</strong></td>
<td><strong>21</strong></td>
<td><strong>26</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

Note: Some specimens were positive in more than one ova of helminths.

A. L. = Ascaris lumbricoides
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3: Problem-Identification :-

(Problem-identification is based on data collected in the sample-surveys as well as clinical experience and information gathered through examination and management of more than 40,000 patients in the Surkhet District Hospital, Birendranagar within a period of 2 years.)

3:1. Among the patients visiting the out-patient-department of the hospital, patients of anaemia, malnutrition and intestinal helminthiasis are in majority. Presence of a Vicious-Circle can be felt in the wide prevalence of these diseases:-

- Bad personal hygiene, and lack of environmental sanitation resulting into intestinal helminthiasis
- Intake of Nutrition - food in critical level
- Anaemia
- Increase in vulnerability to infections diseases
- Malnutrition
- Anorexia

4: Recommendation :-

4:1. For eradication of Intestinal helminthiasis and improvement in the Nutrition-level, supply of drugs and exotic nutritions-food will be of temporary benefit. Emphasis should be given in imparting Health-education to the people regarding local-nutrition-food and

their preparation, environment sanitation, personal hygiene and immunisation progra-
mnes.

4:2. Present system of imparting mass-health-education through the village Health workers and radio-broad-casts is insufficient and time-consuming. Some improvement should be made in these systems, eg, establishing radio-centres in villages; recruiting more number of V.H. Ws. in village-panchayats and refreshing their health-knowledge and job-efficiency; and developing a carrier-ladder for V. H. Ws, etc.

4:3. An audio-visual system for imparting mass-health education should be developed, eg, cinema-In should be routinely exhibited in many places of the district.

4:4. Treatment-based intestinal helminthiasis Eradication campaign should be launched in the district.

4:5. A general survey of intestinal helminthiasis, anaemias, malnutrition and food-habit of the people should be launched in the Far-western Development Region.

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