TREATMENT OF SANDWORM DISEASE WITH HETRAZAN


Johannesburg

Sandworm disease (creeping eruption, larva migrans) is an infestation of the human skin with larvae of the dog or cat hookworm. No treatment has been found which invariably cures the disease. Freezing with ethyl chloride or carbon dioxide snow are often satisfactory, though painful, and various substances have been applied as paints with varying success. Systemic therapy with antimony compounds (Cawston, 1934; Smith, 1943; Dolce and Franklin, 1945) and arsenic (Hitch, 1947) produced varying results. Although these metallic compounds apparently produced some cures, experience shows that failures occur in a considerable proportion of cases. If allowance is made for spontaneous cure, which eventually occurs in every case, the alleged successes obtained with metallic compounds are still further minimized.

A recently synthesized drug, Hetrazan (diethylcarbamazine), has obtained a considerable reputation in the treatment of various forms of filariasis. It was first used by Carrion (1947) in a case of sandworm disease; giving 2 mg. per kilogram of body weight by mouth thrice daily for three weeks he found that lesions disappeared and had not recurred in a further period of five months' observation. Van de Erve (1949) treated 19 cases with Hetrazan by mouth, in doses varying from 1 ½ to 4 mg. per kilogram of body weight obtained three weeks later.

<table>
<thead>
<tr>
<th>Case</th>
<th>Sex</th>
<th>Age in Years</th>
<th>Duration of Disease before Treatment</th>
<th>When Improvement Noted (After beginning of Treatment)</th>
<th>Duration of Treatment</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>M</td>
<td>2</td>
<td>10 days</td>
<td>2 days</td>
<td>21 days</td>
<td>Single track. Cured.</td>
</tr>
<tr>
<td>2.</td>
<td>F</td>
<td>36</td>
<td>3 weeks</td>
<td>7 days</td>
<td>21 days</td>
<td>Three tracks. Cured.</td>
</tr>
<tr>
<td>3.</td>
<td>M</td>
<td>8</td>
<td>9 weeks</td>
<td>7 days</td>
<td>14 days</td>
<td>Three tracks. Cured.</td>
</tr>
<tr>
<td>4.</td>
<td>F</td>
<td>18</td>
<td>7 weeks</td>
<td>3 days</td>
<td>13 days*</td>
<td>Multiple tracks. Cured.</td>
</tr>
<tr>
<td>5.</td>
<td>F</td>
<td>1½</td>
<td>6 weeks</td>
<td>4 days</td>
<td>14 days</td>
<td>Three tracks. Cured.</td>
</tr>
<tr>
<td>6.</td>
<td>F</td>
<td>1½</td>
<td>5 months</td>
<td>17 days</td>
<td>20 days</td>
<td>Multiple tracks. Immediate relapse lasting three days, since when no further activity.</td>
</tr>
<tr>
<td>7.</td>
<td>F</td>
<td>1½</td>
<td>4½ months</td>
<td>15 days</td>
<td>28 days</td>
<td>Multiple tracks. Intermittent activity two months later.</td>
</tr>
<tr>
<td>8.</td>
<td>M</td>
<td>2½</td>
<td>4½ months</td>
<td>15 days</td>
<td>15 days</td>
<td>Multiple tracks. Cured.</td>
</tr>
</tbody>
</table>

*Supplies of Hetrazan ran out after seven days. The condition remained active in a few tracks until a further six days' supply was obtained three weeks later.
thrice daily for periods of 3 to 20 days. Seventeen cases completed the course, and of these fourteen were cured. He concluded that the method was deserving of further trial.

**Present Series.** Eight cases of sandworm disease, contracted in various parts of South Africa, have been treated with Hetrazan, in doses of 2 mg. per kilogram of body weight thrice daily. Details are shown in Table I.

**COMMENT**

1. One case of the eight recorded was not cured after four weeks' treatment with Hetrazan.

2. Five cases had shown the disease for less than two months. In these cases the possibility of spontaneous cures having occurred is slight. Statistics of the duration of the disease in untreated cases in South Africa are not available, but one's experience suggests a normal course of from four months to a year.

3. Side effects were observed in cases 7 and 8 (brother and sister). The former had a morbilliform rash during the third week of treatment, the latter an eruption over the buttocks (i.e. the infested area) resembling erythema multiforme. These eruptions were regarded as an allergic reaction to killed parasites, as is frequently seen in cutaneous onchocerciasis treated with Hetrazan (Mazzotti, 1948). An anti-histaminic was given for a week and both eruptions cleared during that period. This must not be taken as proving that the anti-histaminic was necessarily curative.

4. It is possible that even better results could have been obtained with larger doses of Hetrazan. At the time when this series was treated (January to June, 1950) the standard dose was given as 2 mg. per kilogram of body weight thrice daily. Since then Etteldorf and Crawford (1950) have shown that doses as high as 10 mg. per kilogram of body weight may be given thrice daily for a week without signs of intoxication. It is suggested that a dosage at 6 mg. for a week may be still more satisfactory in the treatment of sandworm than that employed in this series.

**CONCLUSION**

Oral treatment with Hetrazan was apparently successful in seven out of eight cases of sandworm disease.

**REFERENCES**


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**A CASE OF Q FEVER CONTRACTED ON THE WITWATERSRAND**

R. G. SANER, M.B., B.CH.

and

B. M. FEHLER, M.B., B.CH.

Johannesburg Hospital

This case is recorded because at the time the diagnosis of this illness. fever and a headache over the vertex of his skull. He went to bed, and at about 9.30 p.m. that night, he felt cold and his teeth began to chatter. The following day he felt much better and got out of bed; after two hours, however, he felt weak, tired and feverish. That afternoon he went to bed, but was unable to sleep and sweated profusely.

On 20 March he was again feverish and had to change his pyjamas on several occasions. During this time the patient lost his appetite completely; he did not vomit or have diarrhoea. He had no pains in his muscles or joints. On the night of 20 March he had bad dreams and nightmares which continued through the following day and night.

He remembers coming to hospital the next day in a nervous and frightened state. However, from 21 March he remembers events very vaguely indeed. There is no history of mental instability.

**On Examination:** When admitted the patient was para-typhoid. These animals were buried on the farm by the patient with the help of Native labourers.

On 18 March 1950 the patient suddenly fell ill with fever and a headache over the vertex of his skull. He went to bed, and at about 9.30 p.m. that night, he felt cold and his teeth began to chatter. The following day he felt much better and got out of bed; after two hours, however, he felt weak, tired and feverish. That afternoon he went to bed, but was unable to sleep and sweated profusely.

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