Clinical and other Notes.

REPORT ON THE EFFICIENCY OF THE TREATMENT OF BILHARZIOSIS BY INTRAVENOUS INJECTIONS OF ANTIMONY TARTRATE, AFTER TWO YEARS.

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As two cases of active bilharziosis were admitted to hospital early in 1923 and were known to have been treated previously with tartar emetic, which has been regarded as a permanent cure for the condition, it was considered advisable to make a complete examination of all cases within reach who had suffered from and been treated for the disease.

The following is a brief summary of the history of the outbreak:

In May, 1921, the 2nd Battalion Royal Ulster Rifles was drafted to Egypt from Mesopotamia where they had been heavily infected with bilharziosis. On the arrival of the battalion in Egypt from Mesopotamia a complete examination was made of all suspects, with the result that forty-four cases were found with active symptoms of the disease. Between the date of their arrival and December, 1921, fifty-seven more cases developed and brought the total number of cases treated in the Citadel Military Hospital, Cairo, for the year 1921 up to 101.

In 1922, twenty-three cases of bilharziosis were admitted from the Royal Ulster Rifles. Of these thirteen were admitted for the first time and ten were relapses. All these cases undoubtedly contracted the disease in Mesopotamia, and the delay in the manifestations of the symptoms may be accounted for by the great variability in the incubation period of the disease.

Treatment.

All cases were treated with: (1) Intravenous injections of tartar emetic; (2) urotropin ten grains t.d.s.

The tartar emetic was given in ten cubic centimetres of normal saline in gradually increasing doses as follows:

<table>
<thead>
<tr>
<th>Day</th>
<th>Dose</th>
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<tbody>
<tr>
<td>1st</td>
<td>0.5 grain</td>
</tr>
<tr>
<td>4th</td>
<td>0.5 &quot;</td>
</tr>
<tr>
<td>7th</td>
<td>1.0 &quot;</td>
</tr>
<tr>
<td>10th</td>
<td>1.5 &quot;</td>
</tr>
<tr>
<td>13th</td>
<td>1.5 &quot;</td>
</tr>
<tr>
<td>16th</td>
<td>2.0 &quot;</td>
</tr>
<tr>
<td>19th</td>
<td>2.0 &quot;</td>
</tr>
</tbody>
</table>

The interval allowed to elapse between the administration of the injections is considerably longer than is usual, the reason for this being that it was desired to run no risk of unpleasant after-effects that might cause
the treatment to become unpopular with the men, and so lead to concealment of the disease.

**AFTER-EFFECTS.**

(a) **Immediate.**—As a rule no untoward after-effects were experienced by the patient. Occasionally a feeling of choking and suffocation was complained of, and in some cases slight rigors and slight rises of temperature developed after the injection. Attacks of vomiting and headache also occurred in a few cases.

(b) **Remote.**—Two cases developed jaundice in the course of this treatment, probably due to a special idiosyncrasy to the drug. In both cases the jaundice developed during the later stages of the treatment, when the larger doses were being administered, and on the injections being withheld the condition quickly cleared up under appropriate treatment.

**RESULTS OF TREATMENT.**

The results of treatment of bilharziosis by tartar emetic must be considered under two headings: (1) The immediate effect on the disease in its acute form.

(2) The remote effects, with regard to its efficiency as a complete cure of the condition.

(1) **Immediate Results.**—Under the influence of antimony tartrate the live ova rapidly disappeared from the urine. Degenerated ova, characterized by their granular appearance, persisted for some time, reappearing at intervals while pus cells and red blood corpuscles persisted for still longer periods.

The average number of days under treatment amounted to approximately forty-four. The average amount of tartar emetic administered amounted to 10.9 grains. No patient was discharged from hospital as cured until the urine was completely free from blood, pus and ova on three examinations, at two days' interval, and until all signs of cystitis had disappeared.

The immediate action of antimony tartrate on bilharziosis was therefore very satisfactory. All cases showed a progressive improvement from the beginning of the treatment, and on discharge from hospital they were apparently cured.

(2) **Remote Effects.**—As a result of the occurrence of two cases of bilharzia in January, 1923, which had shown a recrudescence of active symptoms a year after cessation of treatment, it was decided, in order to test the efficacy of the treatment to examine all cases remaining with the battalion who had already undergone a course of treatment with tartar emetic and had been discharged as cured. In the interval unfortunately a large proportion of the cases treated had returned to the United Kingdom as time-expired, so that only a small proportion was available for re-examination.
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Only cases infected with live ova were diagnosed as positive, and when any doubt existed the miracidium was allowed to hatch out before a positive finding was given.

The following table records the results of the examination:

<table>
<thead>
<tr>
<th>Total number examined</th>
<th>Positive</th>
<th>Negative</th>
<th>Doubtful</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>7</td>
<td>27</td>
<td>1</td>
</tr>
</tbody>
</table>

Percentage: 20.0 %, 79.5 %, 0.5 %

The case marked doubtful showed large quantities of blood and pus in his urine; but repeated examinations failed to reveal the presence of ova. He has been admitted to hospital for further examination.

The following is a brief summary of the medical history with regard to bilharziosis of the positive cases:

1. Rifleman A. First admission June 11, 1921, to August 8, 1921 (fifty-nine days); 10.5 grains of antimony tartrate received; no symptoms on discharge. Second admission February 2, 1922, to March 21, 1922 (forty-eight days); 10 grains of antimony tartrate given intravenously; no symptoms on discharge.

2. Bugler B. First admission May 29, 1921, to August 22, 1921 (eighty-eight days); 13 grains tartar emetic received; no symptoms on discharge. Second admission February 2, 1922, to April 4, 1922 (sixty-two days); 10 grains of tartar emetic received; no symptoms on discharge.

3. Serjt. C. Under treatment in Citadel Military Hospital, Cairo, from January 3, 1922, to March 13, 1922; 12.5 grains of tartar emetic received. On discharge the urine was free from blood, pus and ova.

4. Rifleman D. Under treatment from February 22, 1922, to May 4, 1922 (forty-four days); 10 grains antimony tartrate received; no symptoms on discharge.

5. Rifleman E. Under treatment from June 11, 1921, to August 8, 1921 (fifty-nine days); 9 grains of antimony tartrate received; no symptoms on discharge.

6. Rifleman F. Under treatment from March 15, 1922, to May 4, 1922 (fifty-seven days); 10 grains of antimony tartrate given; no symptoms on discharge.

7. Rifleman G. Under treatment from October 10, 1921, to November 16, 1921 (thirty-eight days); 8.5 grains tartar emetic received; no symptoms on discharge.

8. Doubtful Case. Rifleman H. Under treatment from February 2, 1922, to April 4, 1922 (sixty-two days); 10 grains of tartar emetic received; no symptoms on discharge.

Of the seven positive cases, Nos. 1 and 2 have relapsed for the third time.

Conclusions.

1. That the immediate effects of the treatment of bilharziosis by tartar emetic are eminently satisfactory, removing all traces of the disease from the patient in a comparatively short time, but the cure in twenty per cent of cases is not permanent.
(2) That all cases of bilharziosis should be kept under observation for at least two years after discharge from hospital, and that periodical examinations should be carried out in order to detect any recurrence of the disease.

NOTE ON STANDARD PATTERN X-RAY COUCH BY BUTT.

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The accompanying drawings illustrate an improvement to the over-the-table tube holder supplied with the standard pattern X-ray couch by Butt.

This table is a satisfactory one to work with except that there is no means of raising or lowering the tube holder except by hand lift.