

# Treatment of Urinary Bilharziasis with Antimony Dimercaptosuccinate (TWSb)

BY

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This is in the nature of a preliminary report; its submission is justified, it is thought, by the remarkably good results obtained with a new drug. Full details of techniques of tests and results will be given in a later report.

## THE DRUG

The drug has been synthesised and prepared by A. E. H. Friedheim, of New York, and is put up as a sterile white powder in rubber-capped bottles, each containing 2.0 gm. of "TWSb." A sterile diluent consisting of pyrogen-free distilled water containing 0.7 per cent. acetic acid is also supplied, if intravenous injection is proposed. For intramuscular therapy normal saline is used as a diluent.

For this experiment 20 c.c. of the acetic acid diluent were added to each bottle containing 2.0 gm. of powder, giving a concentration of 0.1 gm. TWSb per c.c. The solutions thus prepared were used up each day or discarded at the end of the day.

## THE TESTS

Twenty-five African schoolboys at a Highfield Village school were treated. Their ages lay between 10 and 17 years and their weights varied between 27 and 67 kg. (60 and 147 lb.). Each boy had been shown, in a previous school survey for urinary bilharziasis, to be passing viable eggs of *S. haematobium*, and their urines were examined two mornings before the institution of treatment, when all were again found to be passing numerous viable eggs.

They were given 4 c.c. or 0.4 gm. of TWSb intravenously on each of four days, irrespective of their weights, and the whole series was completed without incident. On the first day injections were given at the rate of 2 c.c. per minute (Alves, 1945), but on the second and subsequent days no particular pains were taken to regulate the speed of injection. In one case, one of the bigger boys, the injection was given, intentionally, as quickly as possible, but with no apparent ill-effect.

The patients were completely ambulant during the treatment and there were no objective symptoms of any kind. One boy complained of a "tin" taste in his mouth after his third injection.

There was no coughing or retching either during or immediately after the injections.

## THE RESULTS

It is common to describe treatments and tests of cure in tabular form, in papers of this kind, but there appears to be little or no point in doing so here. Urines from all 25 boys have been examined on six occasions between three and six weeks after treatment and will again be examined when school resumes after the Christmas vacation of six weeks.

All 25 urines are free of living eggs and only a few red blood corpuscles can be found in any of them.

## APPLICATION OF THESE RESULTS

This appears to be the best drug at present available for clinical use in urinary bilharziasis. I propose to treat more schoolboys by the intramuscular route. It is greatly to be hoped that it will be possible to produce cures with two or three intramuscular injections, which would bring the prospects of true "mass treatment" considerably nearer fulfilment.

## SUMMARY AND CONCLUSION

Twenty-five schoolboys weighing between 27 and 57 kg. were each given 0.4 gm. of TWSb (Antimony Dimercaptosuccinate) daily, by intravenous injection, for four consecutive days. They thus received 1.4 gm. TWSb irrespective of weight. The drug produced no objective symptoms of any kind; one boy complained of a bitter metallic taste after his third injection. They were treated as ambulant patients.

Six weeks after treatment no eggs could be found in their urines.

## REFERENCES

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