Further Studies on Antimony Dimercapto Succinate (TWSb) in Urinary Bilharziasis

BY

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A preliminary note on the treatment of 28 young African schoolboys has already been published (Alves, 1958). This paper describes the treatment of 46 young adult Africans, ages 17-21, at a Government industrial school near Salisbury. They all had urinary bilharziasis and were chosen for treatment with this new drug because urine examinations showed that they were passing considerable numbers of viable, healthy-looking eggs and numerous r.b.cs. Treatment ended on 6th January, 1958.

TWSb is supplied as a white crystalline powder in bottles containing 2 gm. of the substance. In all instances 20 c.c. of sterile normal (0.85 per cent.) saline was added to each bottle, and all the solution was used up or discarded on the day of its preparation.

The 46 patients were divided into two groups, one of 20 and one of 26, the first group receiving daily intravenous doses of 0.5 gm. (5 c.c.) for three days, while the second group received the same amount intramuscularly. All patients, therefore, received 1.5 gm. TWSb in three days. There were no untoward incidents. Three patients in the intravenous group complained of excessive salivation, while seven of the intramuscular group complained of pain at the injection sites. This complaint was not, however, to be taken too seriously and represented nothing more than a semi-humorous, semi-serious grouse about the inevitable slight buttock trauma.

Friedheim, da Silver and von Martins (1954) have described electrocardiagraphic and blood pressure studies in patients undergoing treatment with TWSb. It suffices to say that in their group of 134 patients no case showed signs of any untoward effect on the circulatory system.

Results

Follow-up examinations have been done at weekly intervals since treatment was completed. These examinations have now been interrupted by the Easter vacation of one month, but will be resumed when the patients return to school. The last examination having been done on the 3rd April, there has already been a three-months follow-up. Two patients have been consistently positive throughout, one in the intravenous group and one in the intramuscular; while a third, in the intravenous group, after having been negative on the first five examinations, is now also positive. The definite failure rate to date is therefore three out of 46 treated.

Conclusions

This drug is fairly simple to prepare, is easy to administer and has no apparent toxic or side-effects in the doses given, which were the same —1.5 gm. in three days—whether given intravenously or by the intramuscular route.

All the patients in the study were ambulant throughout the treatment and the results indicate that a very large percentage is cured.

It appears that it would be desirable to attempt to shorten even this short course of three days and to try to achieve cures with two injections given on successive days. Success there would surely point the way to successful mass treatments of populations.

REFERENCES

Alves, W. (1958). *C. Afr. J. Med.*, 4, 15.

Friedheim, E. A. H., da Silva, J. R. & von Martins, A. (1954). *Am. J. Trop. Med. Hyg.*, 3, 714.

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