Endocardial Thrombosis.—The high incidence of endocardial thrombosis in the present study was a surprising finding. Mural thrombus is commonest in the auricles and appears to be related particularly to auricular fibrillation and heart failure. Endocardial thrombi may also be more common in the presence of systemic phlebothrombosis, and when atherosclerosis is more severe. It seems certain that endocardial thrombi are much more frequent than it is generally believed and must constitute a potent source of embolism in both circulations.

Systemic Venous Thrombosis.—The findings generally correspond with accepted views. An incidence of 33 per cent when only the femoral veins were examined corresponds with higher figures obtained by such workers as McLauchlin and Paterson who carried out a complete dissection of the veins of both legs in their cases.

Pulmonary Artery Occlusions.—An incidence of 39 per cent in the present series is similar to the findings of other observers. The majority of such occlusions appear to be primarily embolic from veins or heart.

Summary and Conclusions

From a study of 100 consecutive adult autopsies it is concluded that (1) pulmonary vein thromboses are extremely uncommon; (2) endocardial thrombi are much more frequent than is generally realised.

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Mass Therapy in Filariasis

A Note on Control in Niue Island

By E. J. B. Simpson

The value of administering Hetrazan (diethylcarbamazine) to large population groups for controlling filariasis is still a matter for doubt in the minds of a few. Others, who have tried this method, have reported considerable success. Hewitt *et al.* distributed Hetrazan to the inhabitants of St. Croix (population 12,000–14,000) in three daily doses spread over a period of one week, the total adult dose being 2.1 grams, for children 1.05 grams. A check survey in five villages showed that whereas 16.6 per cent of 724 persons were positive carriers before treatment, one year after treatment only 6.8 per cent of 434 persons from the same villages were positive carriers. Kessel has pointed out that in districts of Tahiti where no control measures had been applied, the percentage of mosquitoes harbouring infective larvæ remained constant, while in districts where Hetrazan had been given to carriers and to the total population, a reduction was noted in the percentage of such mosquitoes.

Although on Niue Island for a number of years measures have been in force for controlling the breeding of mosquitoes, the widespread use of Hetrazan has only been carried on for one year. In 1954, a survey was carried out by the Chief Medical Officer for the purpose of assessing the numbers of positive human carriers. Seven hundred and forty-eight persons were examined and 166 of these were found to harbour microfilariæ, the percentage being 22.1. No microfilaria counts were done at this time and only adults were examined. Microfilariæ are found at all times during the hours of daylight in peripheral blood in Niueans, there being no

specific nocturnal migration into the peripheral blood. Testing was carried out during the mornings.

In January, 1956, mass Hetrazan therapy was commenced. A single 50 mg. tablet was given to every person on the island each month. The tablets were at first regarded with undisguised suspicion by the people, but they rapidly came to realise the value of the drug. It was interesting to note that in a positive but symptomless carrier the administration of a small dose of Hetrazan, in many cases, led to the development within twenty-four hours of pain in the limbs and in joints. This was relieved rapidly by Hetrazan mgm. 50 t.i.d. for two weeks, with a break of one week between each week of treatment. Cases so treated were negative on blood examination after the cessation of treatment.

In November and December, 1956, a second survey was carried out. A total of 2,791 persons, of ages from 6 years upwards, were examined; 83 were found to be positive carriers, the percentage being only 2.9. These positive carriers were given a full course of Hetrazan at once. This low percentage cannot be ascribed entirely to the effect of Hetrazan. The Niuean people maintain a high standard of village cleanliness and monthly mosquito control days are a routine, the people realising the need for improving standards. In addition, every house is sprayed annually with Dieldrin, although it is doubtful if this measure does much towards reducing the number of mosquitoes, which are largely bush dwellers.

The writer is not in a position to say whether or not Hetrazan in small monthly doses affords direct protection to persons who are negative for microfilariæ. That this type of mass treatment provides the clinician with a moderately effective means of identifying positive carriers each month, thereby ensuring prompt full-scale Hetrazan therapy, is not to be doubted, and from this fact it is reasonable to suggest that the rapid fall in the percentage of positive carriers on Niue may be due to a reduction in the numbers of mosquitoes containing infective larvæ. Whatever the real cause may be, the effect of such mass treatment has been, for this island, most encouraging.

Summary

The effect of mass Hetrazan treatment in St. Croix and Tahiti is mentioned.

Results of surveys of the percentage of human carriers of microfilariæ on Niue Island before and after a period of mass Hetrazan treatment are given. A fall in the percentage of such carriers is recorded.

The view is expressed that, as result of proper Hetrazan treatment of those positive carriers identified by reason of their clinical reaction to small monthly doses of Hetrazan, the total number of mosquitoes harbouring infective larvæ is reduced.

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References

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