Tropical diseases--Haiti

Studies with dichlorvos residual fumigant as a malaria eradication technique in Haiti; parasitological studies

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STUDIES WITH DICHLORVOS RESIDUAL FUMIGANT AS A MALARIA ERADICATION TECHNIQUE IN HAITI

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The original plan for parasitological evaluation was to obtain a 30% blood film sample from the populations of the DDT- and dichlorvos-treated zones, each sample to be of a randomized type. The annual surveys were planned in such a way as to take less than 1 week to be carried out. In every village of the area, blood samples were taken at random by trained personnel from people gathered on the central square, at a cross-road or other convenient location. The proportion of the normal age-group distribution in the Haitian population (1950 census) was followed; mention was made whether the individuals had a history of fever.

To maintain good cooperation from the population and to avoid biasing the results by antimalarial drug distribution, aspirin only was given for every blood sample taken.

The thick blood films were taken and processed according to Walker's technique and recom-
of the blood samples taken at random from a fair-sized sample of the population.

Due to the fact that there could not be any reasonable doubt about the continuation of transmission in the dichlorvos area, no further case investigation was deemed necessary in order to confirm their autochthonous origin.

A study of the results, locality by locality, confirmed the parasitological findings, i.e., transmission was continuing in areas where there were high mosquito densities.

SUMMARY

Blood film samples were taken of 30 percent of the population in the Commune of Arcahaie, Haiti, to determine the effect on malaria transmission produced by the periodic treatment of homes with the dichlorvos residual fumigant. Prior to insecticidal treatment, infants 0-12 months showed a positivity index of 6.5 percent in 2,489 smears. At 1 and at 2 years after treatment, samples in the same age group had positivity indices of 7.0 and 2.2 percent, respectively. Plasmodium falciparum was the principal parasite but infections of P. vivax and P. malariae also occurred. Despite reduction in infection levels in infants and in children over 1 year of age, interruption of malaria transmission was not apparent.

REFERENCES