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Onchocerciasis Control Programme in the Volta River basin area

INTRODUCTION OF THE ETIOLOGICAL EVALUATION UNIT

Dr F. Krämer
The Introduction of the Epidemiological Evaluation Unit

The objective of epidemiological evaluation is to measure the impact of the vector control on population in terms of the frequency and intensity of the disease. In general, this calls for the compilation of ophthalmological, parasitological, medical as well as sociological information.

The first year of the commencement of this operation in the different geographical stages over a period of three years ending in 1977, is devoted to the collection of basic data - an indispensable point of reference for all future changes.

The villages to be examined are selected so as to ensure the best possible geographical coverage. The Unit uses two methods of evaluation:

- simple evaluation
- detailed evaluation

Simple evaluation gives information mainly on onchocerciasis infection. It consists of cutting two tiny specimens from the right and left sides of the hip. Then these samples, placed on a razor-blade, are dipped into a drop of water to allow the parasites to come out. These parasites - very thin worms hardly one-third of a millimetre long - are then counted with a special microscope. The team also tests visual sharpness with the aid of cards on which are drawings of hands of different sizes. The persons examined should indicate the position of this hand as presented to them on the different cards.

Detailed evaluation gives information mainly on onchocerciasis disease and its decline through the larvicide campaign (1).

Apart from cutting samples and measuring visual sharpness, detailed evaluation consists of examining the patient physically in quarantine. By this process modules are counted and the different traces of onchocerciasis are detected on the skin. But detailed evaluation consists above all of an ophthalmological examination by the aid of a bimicroscope installed in a truck converted into a dark room. Through this examination, it is possible to distinguish live and dead parasites in the cornea and the aqueous humour of the eye. All the data collected during the evaluations are checked in two ways:

- manually with the aid of a small calculating machine
- by a computer, at the WHO Headquarters in Geneva

(1) Detailed evaluations are made only in some villages and on everybody above 5 years.
The computer returns to the Programme tabulations on the frequency and intensity of the different signs collected.

The expected result will depend on the natural death of the parasites present in the body of the inhabitants of the area on one hand and the increase in number of the new age group not yet infected, on the other hand.

The parasites can be quickly destroyed with anti-parasite medicines.

Of these medicines, two are currently used:
- diethylcarbamazine (= notezine) and
- suramine (= Moranyl)

Unfortunately, these medicines sometimes have dangerous side effects and cannot be used extensively by a non-specialist staff. Efforts by WHO to find new medicines are still underway. In the meantime, the patients who stand the greatest risk of becoming blind are directed as much as possible to a health centre or a hospital where they can be treated. Treatment normally lasts several weeks and cannot be given by the epidemiological evaluation teams which stop for only two or three days in each village. Within the measure of their capabilities, these teams give treatments for current ailments other than onchocerciasis.

Thanks to the cooperation of the population and the authorities in the countries concerned, the number of villages and persons examined is much more than initially estimated.

Onchocerciasis or river-blindness attacks a large portion of the population living near running water. People in these areas will henceforth be protected in the most generalised possible way against new infections and sub-infections. There remains only a relatively small number of patients suffering from onchocerciasis who need an urgent and individual treatment. It is not possible for the epidemiological evaluation teams of the Programme, with however very few exceptions, to give treatment themselves. But it is their duty to find out people who run a greater risk of losing their sight and direct them to a health centre or a rural hospital where they will be given priority treatment. To perform this duty successfully, the evaluation teams only need to be presented with the largest number possible of people in each village visited.