

Setting the stage for onchocerciasis

Abiose *et al*, in this issue of the journal, have demonstrated the impact that onchocercal infection has on the prevalence of blindness and visual impairment in Kaduna State, Nigeria. In mesoendemic onchocercal communities, 43% of recorded blindness was due to onchocerciasis. This situation has prompted the introduction of ivermectin distribution in Nigeria by a variety of organisations coordinated by the Prevention of Blindness Programme of the World Health Organisation (WHO). To date, it appears that once a year administration over a period of at least 12–15 years (the life span of the adult worm) could reduce the reservoir of microfilarial infection in the communities to such low levels as to eliminate the incidence of blindness from onchocercal infection. In other onchocercal epidemic areas of Africa where regular spraying of insecticide is carried out over a defined period (14 years) to reduce the vector, teenage villagers are free of infection, a tribute to the success of this strategy. However, this intervention has been quite costly and labour intensive. Ivermectin distribution to endemic communities to control onchocerciasis has now come to be regarded as the strategy of choice, and, as the introduction to Abiose *et al*'s paper indicates, the study reported here occurred during a field trial of ivermectin.

Nigeria, among other African countries, is embarking upon a major ivermectin programme. However, it may be worthwhile to review some of the potential pitfalls that could beset a distribution programme. Firstly, there are a number of organisations prepared to distribute ivermectin. Their efforts will be most effective if close coordination already in place through the WHO programme can be maintained. Secondly, careful ongoing assessment of both efficacy and, most importantly, safety, is essential. This includes the question of the effectiveness of the distribution system in

reaching all those patients at risk. We know that the distribution of vitamin A to young children twice yearly has not reached all those at risk. Only under the most rigorous experimental conditions has vitamin A distribution proved effective, but distribution schemes in general have not been workable within the local health care delivery system.

However, it needs to be stressed that the strategy being adopted for ivermectin distribution is to integrate this fully with existing primary health care delivery. In areas where this is poorly functional, it is expected that efforts to distribute ivermectin would serve as entry points for primary health care delivery development. Safety has to be reviewed constantly and, as ivermectin is extended into areas where onchocerciasis exists with other infections (for example, *Loa loa*), vigilance has to be maintained in the monitoring of adverse reactions, again coordinated among all organisations distributing the drug. An additional problem is the unauthorised distribution of the drug, either through the black market or for use for other purposes. Thirdly, there is the need for evaluation at periodic intervals. So often major programmes are implemented at considerable cost and never evaluated so that one never knows whether the project was successful or what lessons could be learnt to improve the next project.

Let us hope that the ivermectin distribution will incorporate the concepts of coordination, efficacy, safety, and evaluation into the programme. Only by such efforts will the scourge of onchocerciasis be eliminated for all time.

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