Ivermectin-based onchocerciasis control in Cameroon

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Problems have been encountered in Cameroon in the development of a comprehensive nationwide ivermectin-based onchocerciasis control programme within the primary health care system, which is undergoing profound structural and policy reforms. Solutions are proposed, and in particular a reliable, sustainable and cost-effective mechanism of ivermectin distribution involving community participation is advocated. Constraints linked to health facilities and the drug supply system can be expected to take a considerable time to solve.

The availability of ivermectin free of charge through the Mectizan® Donation Programme has brought new possibilities for onchocerciasis control to countries where the disease is endemic. On the basis of results from two pilot ivermectin distribution projects the Cameroonian Ministry of Public Health decided in 1991 that a comprehensive nationwide control programme should be undertaken which would have to be integrated into a primary health care system that was being simultaneously reoriented so as to make it accessible to the entire population. The aim is to control morbidity caused by onchocerciasis, in particular skin and eye disease and blindness, through the annual distribution of ivermectin to all eligible persons within the framework of the primary health care system. A cost recovery mechanism has been devised to cover services associated with the distribution of the drug. It is intended to eliminate onchocerciasis as a public health problem within 15 years. The Ministry is collaborating with WHO, other United Nations agencies, and nongovernmental organizations in order to achieve this goal.

Certain factors have had an adverse impact on the implementation of the onchocerciasis control programme, some associated with the current status of the health care system, others with the development of ivermectin distribution projects.

Inaccessibility

A significant proportion of the affected population does not have access to ivermectin treatment. At present the coverage rate of the primary health care system is estimated to be between 20% and 30%; under the current reform, involving extension from district to district, many years can be expected to elapse before everyone is reached.

Over 60% of the population does not have access to health facilities providing even the most basic services. Primary health care

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coverage, including ivermectin distribution, is bound to be restricted until adequate facilities are in place. As yet there are no functional health districts where the onchocerciasis control programme could be integrated with other health services. The ivermectin distribution projects are trying to integrate their work into those facilities that are most likely to become the building blocks of health districts.

There is no national system for the supply and distribution of drugs such as is required by the Mectizan® Donation Programme. At present, ivermectin distribution is controlled from the office of the national coordinator, and health personnel requiring the drug are obliged to travel to the capital to sign for it at the Ministry of Public Health. Drug supply systems are being developed by primary care projects at provincial level, and the Ministry of Public Health is strongly committed to the creation of a supply system that could meet the needs of the national programme.

**Sustainability of ivermectin distribution**

The Ministry has had to rely on donor support for the development of ivermectin distribution projects. When this support ends, funds will undoubtedly be needed to buy capital equipment. Meanwhile, it is essential to build technical skills and achieve integration into the primary care system so as to avoid having managers of ivermectin distribution projects whose sole function is to organize vertically. Because responsibility for each geographical region is taken by a different donor agency there are variations between regions in the pace of development of the primary care system and in the distribution of ivermectin.

Much of the information on the distribution of the disease and on associated morbidity is purely anecdotal. A method of rapid epidemiological mapping has been tested and is now being applied throughout the country (1). The early ivermectin distribution projects were developed before there was a national plan of action, and it was left to the individual projects to determine their own strategies. In 1993 a national plan setting guidelines and standards was drawn up on the basis of the experience that had been gained.

**Cost and coverage**

Most projects now charge for each dose of ivermectin in accordance with the Ministry’s policy of cost recovery. The extent to which the low coverage rate is attributable to this fee is not known. In some instances the funds generated have been mismanaged by the primary care personnel responsible for the distribution of ivermectin, and a ministerial order has therefore been issued on the handling of this money.

Neither the clinic-based nor the outreach approach to distribution has achieved satisfactory coverage. Clinic-based distribution is usually carried out in rural areas where the occurrence of onchocerciasis ranges from sporadic to hypoenemic. Health professionals give ivermectin to eligible persons who present with suspect or evident onchocerciasis. This approach is comparatively simple and inexpensive. However, people at risk of blindness from onchocerciasis mostly live a long way from the nearest clinic and lack adequate means of transport, and attendance is consequently poor.
Outreach activities require considerable human and financial resources. Vehicles are needed and field allowances have to be paid. For various reasons the outreach responsibilities of health centre personnel may not be performed.

- The shortage of dedicated transport severely limits the activities of staff outside the catchment areas of health centres.
- Where transport is available the cost of running it often cannot be afforded, notwithstanding the charges made for ivermectin doses.
- Some health workers regard outreach activities as a hardship or as an additional task and want extra remuneration for carrying them out, whereas the Ministry insists that this is impossible because of the economic situation.

Health education

Clearly, public education about onchocerciasis and its control with ivermectin should be undertaken before the drug is distributed. Unfortunately, major shortcomings have occurred in the educational process:

- messages on exclusion criteria and adverse reactions have apparently not been received by some people taking ivermectin;
- incorrect information has been given;
- rumours of deaths resulting from the ingestion of ivermectin have been circulated.

Some people have refused to take the drug because they were told, wrongly, that drinking alcohol and smoking tobacco was not possible during the three days before and after treatment. With a view to achieving sustainability, cost-effectiveness and improved coverage, operational research should be conducted into alternatives to the classical distribution methods. Community participation in distribution is desirable, given the need for repeated annual treatment over many years. False rumours about ivermectin should be confronted whenever they occur.

Integration into the primary care system

The health centres with the best performances provide care to only 30% of the people in their catchment areas. Obviously, if the distribution of ivermectin were integrated into the present primary health care system the coverage could be no better than this. Regrettably, there is no integration plan that takes account of the various field situations. The use of ivermectin distribution as an entry point or springboard for primary care in non-reoriented health centres faces difficulties. The importance attached to the reorientation of primary care on the one hand and ivermectin delivery on the other differs from area to area.

Only a limited number of people could be expected to have access to ivermectin treatment if the distribution of the drug were integrated into the primary health care system in its present state. Nevertheless, integration on a sustainable basis could be expected to benefit this system as well as combating onchocerciasis. Operational research is needed on the safety and sustainability of using village-based volunteers to distribute ivermectin, since this practice would greatly increase the availability of the drug.
The large demand for ivermectin in the areas of Cameroon where onchocerciasis is endemic opens the way for maximum community mobilization, sufficient cost recovery to enhance the sustainability of the programme to a significant degree, and the strengthening of health services in underserved communities. Additional benefits of ivermectin treatment, such as the expulsion of intestinal worms, could increase confidence in the health services.

Present strategies should be analysed and reviewed in order to arrive at a reliable, sustainable and cost-effective mechanism of ivermectin distribution. Problems associated with such matters as the development of health facilities and human resources, the setting of policies, and the creation of a drug supply system can only be solved over a long period.

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Reference

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Tobacco control: voluntary agreements do not work

Despite the advantages of legislation and particularly that of putting the weight of government behind a non-smoking policy, a few countries continue to rely on voluntary agreements [between the government and the tobacco industry]. These agreements, sometimes referred to as "codes of practice", establish principles under which the industry agrees, for example, to abide by certain restrictions on advertising or to place health warnings on cigarette packages. ... A number of countries that once relied on voluntary agreements with the industry have rejected this arrangement and have replaced it with legislation as a more effective method of control. ...

Voluntary agreements are a weak means of controlling tobacco promotion; they are complex and difficult to monitor, and are subject to differences of interpretation which can hinder implementation. They take years to negotiate, and leave the industry free to find loopholes and to evade the restrictions by sponsoring sports and cultural events, introducing indirect advertising on television, and placing cigarette brand names on other products.