

Public Health Practice

P. P. Simarro, P. Ndongo, M. Mir, & F. O. Sima

Integration of disease control programmes

In Equatorial Guinea the structures of the Trypanosomiasis Control Programme and the primary health care network are being used by the country's campaign against schistosomiasis. The benefits—and considerable difficulties—of this endeavour are discussed in the present article.

In 1987 the World Health Organization asked Equatorial Guinea to assess the status of schistosomiasis in the country. Because the Ministry of Health lacked the necessary resources it was decided to use those of an established disease control programme. A study was initiated with a view to discovering the extent of schistosomiasis, setting up a national control programme, and assessing the feasibility of integrating such a scheme into the activities of the Trypanosomiasis Control Programme and the primary health care system.

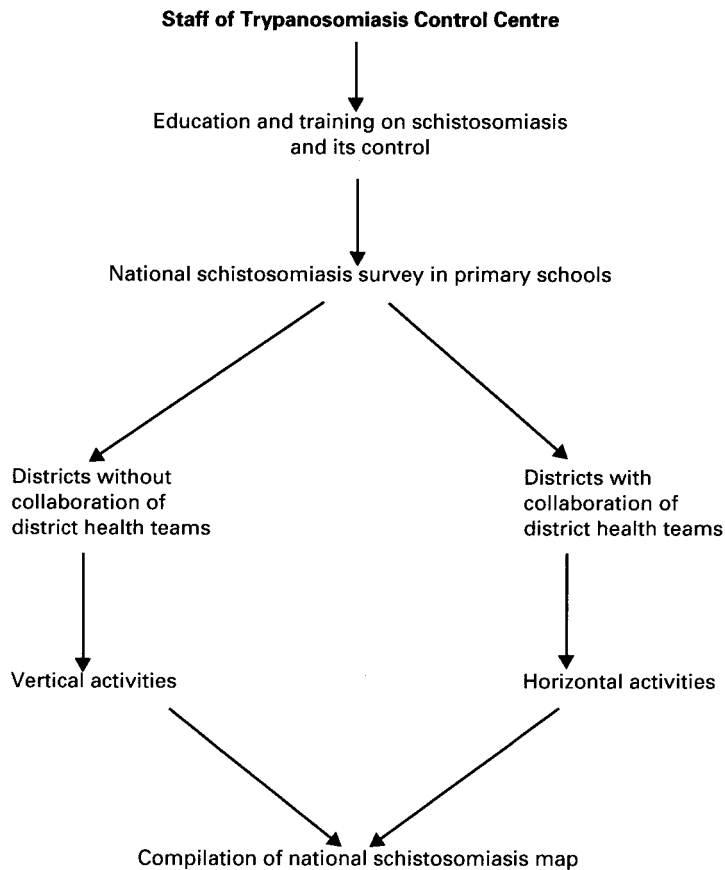
Schistosomiasis Control Programme

A draft Schistosomiasis Control Programme was drawn up and a national director was appointed. Funds were provided by the Spanish Agency for International Cooperation. Activities were organized in the following stages:

- study and planning;
- intervention;
- maintenance.

In the first stage (Fig. 1) a team from the Trypanosomiasis Control Centre worked in conjunction with district health teams, and the epidemiological data needed in order to prepare a national control programme were collected. The problems detected were taken into account and operational methods were planned in accordance with the capacity available nationally. A national epidemiological survey was conducted,

Dr Simarro is Director of the Schistosomiasis Control Project, Spanish Agency for International Cooperation, Apartado Correos 560, Bata, Equatorial Guinea. Dr Ndongo is Director of the National Programme for Schistosomiasis Control, Ministry of Health, Equatorial Guinea. Ms Mir and Mr Sima are technical assistants with the Spanish Agency for International Cooperation and the Ministry of Health of Equatorial Guinea respectively.

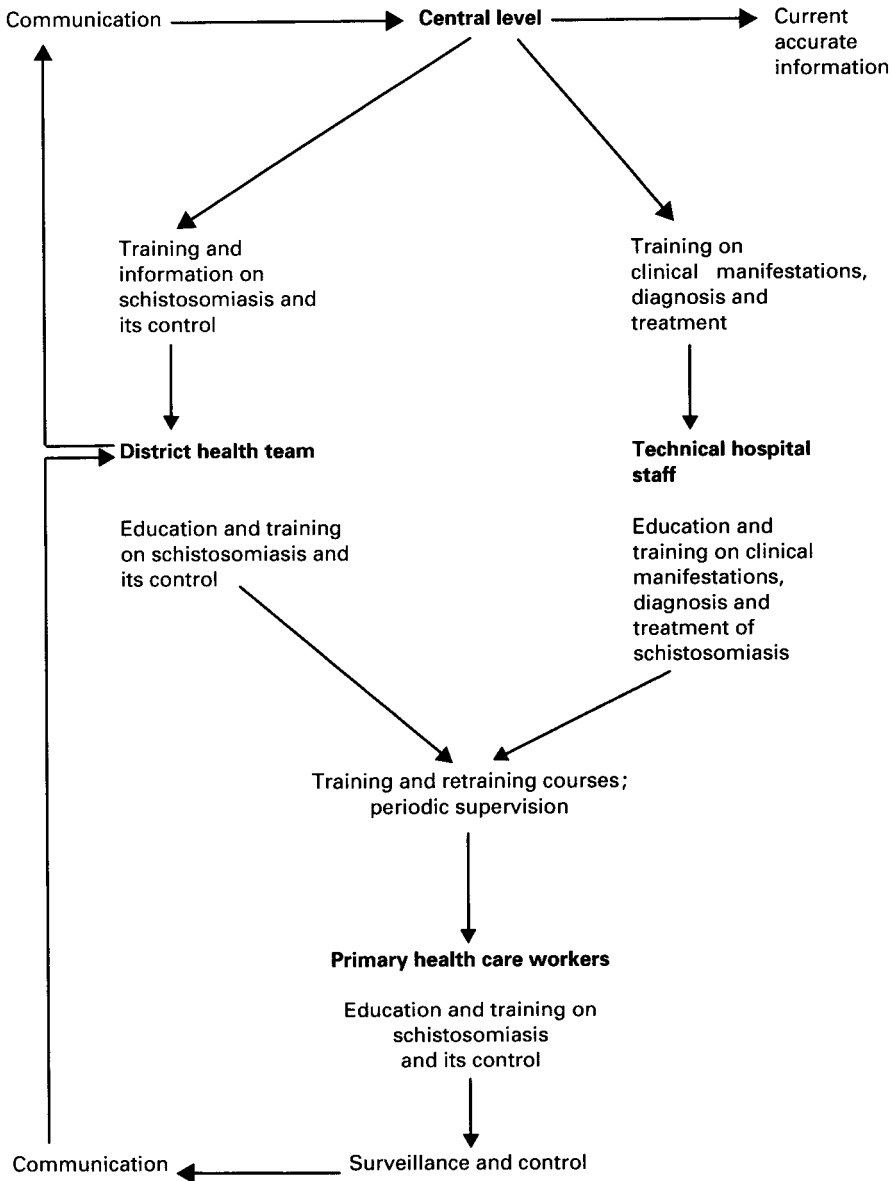
Fig. 1. Schistosomiasis Control Programme: first stage — methodology

using stratified random cluster sampling of schoolchildren aged 5–15 years. A national control programme was published.

In the second stage, action was taken in response to the epidemiological situation that had been revealed. Foci were controlled through diagnosis, treatment and health education, and measures were taken against the intermediate host. The work involved collaboration between a specialized team from the Trypanosomiasis Control Centre, district health teams, and primary health care personnel.

The third stage (Fig. 2) required participation by the central specialized team, hospital teams, district health teams, and primary health care workers. The special services of the central team were expanded, and training and supervisory procedures for health staff were established, in order to maintain satisfactory quality of control activities at all levels of health care. In this connection it was essential to update information on the situation constantly. Health staff attached to provincial and regional hospitals were taught how to identify possible cases and what drug

Fig. 2. Schistosomiasis Control Programme: third stage — implementation and maintenance



treatment to use for confirmed cases. Laboratory personnel learned how to confirm or clear suspected clinical cases.

Primary health care workers received instruction on the nature of schistosomiasis and its transmission, the dispatching of

samples, the notification of cases and activities, and community action aimed at avoiding the disease.

Prevalence and transmission

During a national survey of elementary schools, 179 cases were detected; eggs of *Schistosoma intercalatum* were found in the faeces of 178 individuals, while in the remaining case the faeces contained eggs of *S. mansoni*. No *Schistosoma* eggs were found in urine. The disease is a predominantly urban phenomenon in Equatorial Guinea, mainly affecting the city of Bata, which is in the continental region, where *Bulinus forskalii* occurs and local transmission has been confirmed. No other potential hosts for human schistosomiasis have been found. Local transmission also takes place in several villages near Bata and in the town of Añisok. Elsewhere in the country, cases are considered to have been introduced from outside the districts where they have been detected. The prevalence rates in the continental and insular regions are 4.4% and 0.9% respectively, giving a value of 3.7% nationally.

Eight of the country's 18 districts have been studied by district health teams. The occasional assistance of the central team was needed in two districts and the remaining eight districts were studied exclusively by the central team because district staff were unable or unwilling to participate.

The urban distribution of the disease and the proximity of the urban foci to the laboratory of the Trypanosomiasis Control Centre made it possible for this institution to study the urban epidemiology of *S. intercalatum* (1) and the impact of repeated selective population chemotherapy with praziquantel on the epidemiology of this pathogen in the city of Bata (2).

It became clear that personnel who were knowledgeable about the control of trypanosomiasis and accustomed to field work could readily cope with the methodology for controlling schistosomiasis. The knowledge of the staff of the Trypanosomiasis Control Centre about epidemiological work and microscopic diagnosis made it possible to create efficient laboratory and field assistance for the Schistosomiasis Control Programme. Where district health teams collaborated, primary health care workers could be entrusted with the tasks of obtaining samples and sending them to the central laboratory.

Certain difficulties, however, hindered complete integration, as outlined below.

- primary care staff are overworked and do not easily accept additional responsibilities.
- The epidemiological aspects of schistosomiasis and trypanosomiasis are very different. The control of trypanosomiasis demands the taking of blood samples, whereas that of schistosomiasis requires

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urine or stool samples. Trypanosomiasis has a rural distribution, whereas schistosomiasis occurs mainly in urban areas. Trypanosomiasis commonly affects adults, whereas schistosomiasis occurs most frequently among children aged 5–14. Finally, trypanosomiasis has long been endemic in Equatorial Guinea,

its signs and symptoms are well known and it is recognized as a dangerous sickness by the people, who are consequently motivated to seek diagnosis and treatment; *S. intercalatum*, on the other hand, causes few signs and symptoms and so people tend not to demand specific countermeasures and are unaware of any personal benefits of treatment.

However, thanks to the activities described above, all health staff, including primary care workers, now have some knowledge of schistosomiasis, and this augurs well for the third stage of the programme.

The integration of schistosomiasis control into other disease control or health programmes may not be easy, since it depends to a considerable degree on economic resources and general health policies, as well as on the operational stages,

a general awareness of the diseases in question, and the extent to which they share geographical and epidemiological characteristics.

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2. Simarro, P. P. et al. Effect of repeated targeted mass treatment with praziquantel on the prevalence, intensity of infection and morbidity due to *Schistosoma intercalatum* in an urban community in Equatorial Guinea. *Tropenmedizin und Parasitologie*, **42**: 167–171 (1991).

Early treatment of filariasis

In all endemic areas of lymphatic filariasis, a useful individual contribution to control is the prompt seeking of drug treatment by patients at the earliest stages of noticeable symptoms and signs, in areas where organized drug administration programmes do not exist. The process is greatly facilitated by education campaigns to increase individual awareness of filariasis, and by ensuring that primary health care workers recognize the disease and have adequate supplies of drugs to treat it.

– *Lymphatic filariasis: the disease and its control. Fifth report of the WHO Expert Committee on Filariasis.* Geneva, World Health Organization, 1992 (WHO Technical Report Series, No. 821), p. 54.