ONCHOCERCIASIS CONTROL IN TOGO

Achievements and Prospects after OCP

2002
I. INTRODUCTION

1.1. Onchocerciasis in West Africa before OCP

- Onchocerciasis prevails in Africa, America and in the Arabian peninsula.
- It was estimated that in the world:
  - Approximately 122.9 million people are exposed to onchocerciasis.
  - More than 17.7 million people were infected with the disease.
  - More than 270,000 people were blind and at least 500,000 had visual impairment caused by onchocerciasis.

- Africa is the continent most affected, with more than 16.9 million (95%) victims. West Africa was not only particularly affected but most of it had the most significant foci of the most serious form of the disease. These foci were located particularly in the northern parts of Benin, Togo, Côte d'Ivoire, Ghana, east of Mali, the south of Niger and were disseminated in the whole of Burkina Faso. It is in these areas known as the original area, covering 654,000 km² that the Onchocerciasis Control Programme in West Africa (OCP) was started. The Programme then extended to the foci south of Côte d'Ivoire, Benin, Togo and Ghana, then to the west of Mali, Guinea, Guinea-Bissau, Senegal and Sierra Leone. Today, the whole of the Programme area covers 1,235,000 km² with almost 40 million people. Before the beginning of the control operations, there existed more than 3 million onchocercal patients out of which approximately 135,000 were blind.

- Onchocerciasis is a parasitic disease. It is caused by a filarial (a worm) known as Onchocerca volvulus. The adult worm which develops only in man produces microfilariae which is transmitted to other men by the bite of a tiny fly commonly called "simulie", the vector of the disease. Onchocerciasis prevails only in rural areas, in the settlements located along the rivers with fast flowing current. The simulie reproduces in these rivers, hence the name "river blindness" which is still interchanged with the name onchocerciasis. The most exposed communities are those located approximately ten kilometres on both sides of the rivers.

- Blindness, the nuisance and other consequences of onchocerciasis are factors for the deterioration of the living conditions of these communities and the cause of the abandonment of the fertile riverain lands by the villagers.

- An agreement signed in 1973 between the participating governments and WHO defined the limits, the objectives, the of consultative structures and management of the Programme as well as the modalities for control operations and evaluation procedures.

- After approval of the mission report of the "Support Programme to Governments" in January 1974, the budget necessary for the implementation of the onchocerciasis control programme in the Volta basin was voted. WHO was then designated as the Executing Agency. In a fit of international solidarity, 22 countries and institutions financed the activities of OCP for nearly three decades.

1.2. Control Strategies used

The main strategy used is vector control to which ivermectin treatment was added in 1987. In certain areas, vector control was the method used and in others ivermectin treatment only. In some others on the other hand, the two strategies were combined.
1.3. Results obtained in the OCP area

- Onchocerciasis is now eliminated as a problem of public health in all the OCP area. In some limited foci however, there is the need to improve on the results achieved.

- Nearly 40 million people are protected today from onchocerciasis and more than 18 million children born since the beginning of the Programme have escaped the risk of onchocercal blindness.

- 600,000 cases of blindness have been prevented

- Presently, more than 25 million hectares of riverain lands have been redeemed and is being re-populated and developed. This will enable about 17 million people to be nourished.

It is to be noted however that, at some points, the results need to be improved. These are the tributaries of the Oti in Togo, the Ouémé in Benin, the Pru in Ghana, the Mafou and the Tinkisso in Guinea.

II. ONCHOCERCIASIS IN TOGO BEFORE OCP

Togo belongs to the eleven (11) countries, and is one of the seven countries of the original area of the Onchocerciasis Control Programme in West Africa (OCP).

Twenty-eight (28) medical districts, out of the thirty-five (35) in the country are endemic, spanning an area of 41 000 sq km, out of the total 56 000 sq km of the country. Thus, the programme area represents 73.21% of the total area of the country. The population at risk is approximately 2 1143 434 inhabitants.

Before the launching the Programme, prevalence rates were very high (88.5% at Titira) in the areas of strong onchocercal endemicity. The Community Microfilarial Loads (CMFL) were also very high (60.10 by skin snip test at Alamassou) and rates of blindness reaching 4% could be observed in certain areas (Landa Pozenda).

The pre-control entomological evaluations reveal very high Annual Biting Rates (ABR) and Annual Transmission Potential (ATP) (93,604 and 14,003 in Tetetou, 52,340 and 1,211 in Landa Mono).

III. STRATEGIES

3.1. Vector control

- It started in 1977 in the original area, in particular on the Oti and its tributaries: the Kara, Keran and the Mo including the Savannah Areas, Kara and part of the Central Region.

- It extended to the south of the country (southern extension) in 1988, especially on the basins of the Mono and its tributaries (the Anie, Ogou), the Zio, Yoto (central region, of the plateau and the coastal area).

- The Onchocerciasis control activities started in Togo in 1977, with only one strategy based on vector control by weekly aerial larviciding, depending on the duration of development of the aquatic larval stage of the blackfly.
Seven insecticides (six chemical and one biological) were used in rotation, to avoid the appearance of resistance of any kind in the vector.

3.2. Treatment with ivermectin

- Ivermectin was introduced in Togo in 1988, in the Kara region and part of the Central region. Before 1997, it was distributed by mobile teams.
- Community-Directed Treatment with Ivermectin (CDTI) is carried out by the communities themselves since 1997. It started in the Kara region before being extended to the endemic prefectures of the country.
- Today, more than 4,300 villages are under CDTI.

3.3. Training of nationals

To ensure the maintenance of gains by the Participating Countries, OCP undertook the training of nationals, both academically and through in-service training, particularly in control strategies.

3.4 Other strategies

Information, Education and Communication (IEC), epidemiological and entomological surveillance also constitute control strategies of the disease.

IV. RESULTS OBTAINED IN 2002

4.1. Results in Togo

On the epidemiological level

In addition to the specific intervention zone (SIZ), made up of the basins of the Keran, Kara and the Mo, where the epidemiological situation is not very satisfactory, the rest of the OCP area has prevalence rates lower than 5% and quasi-nil microfilarial loads.

In 2002, 54 villages out of 65 evaluated in the southern extension i.e. 88%, had a prevalence rate lower than 5%.

The prevalence rates in all the villages have drastically dropped, as compared to the figures at the beginning of the Control Programme (example: Titira from 88,5 to 22 %; Bagan from 65,7 to 2,6%, Tokpo from 85,1 to 2,5%).

On the entomological level

In the original area, there is no apparent risk of resumption of infection (rate of infectivity at Oti-Toutionga equal to 0,2564 infective females for 1000 caught flies in year 2000, lower than the critical point of 0,5 infective female for 1000) after approximately ten years of suspension of vector control activities.

In the southern extension area, the initial Annual Transmission Potential (ATP), which varied from 362 to 14327 was reduced from 96 to 100%. It now varies from 0 to 65 maximum.

In the specific intervention zone on the Keran, Kara and the Mo, the evolution of the entomological trends is favourable, after the reinforcement of the actions undertaken on these basins (experimental treatment on the main Oti River, resumption of larviciding stopped in 1990, on the
lower Keran and lower Kara, intensive larval prospections, and intensified manual ground larviciding: reduction of the ATP by 93% at Titira on the Keran, by 100% at Landa-Pozenda on the Kara, by 98% at Bagan on the Mo.

**Treatment with ivermectin**

The objective is to treat 100% of the endemic villages, and at least 65% of the population of each eligible village.

In 2001, the geographic and therapeutic coverage rates were more or less satisfactory. Geographic coverage = 97% (4391 villages treated out of 4.540 envisaged); therapeutic coverage = 74 % (1.590.264 people treated out of 2.143.434 listed). In 2002 the partial results indicate 70% of geographic coverage and 68% of therapeutic coverage.

**Training**

On the whole, 58 people in Togo benefited from a training scholarship of OCP, namely 20 in entomology, 22 in public health, 11 in epidemiology, 3 in ophthalmology and 2 in hydrobiology.

The doctors and nurses in the endemic areas benefited from training sessions on control strategies, and Community distributors on the implementation of CDTI.

**V. OBSERVATION**

5.1. **Strengths**

- the CDTI is effective in all the endemic zones of the country.
- There is at least a Community Treatment agent (CTA) in each eligible village under CDTI
- the coordination of the NOCP, has since 2000, been placing ivermectin orders directly with MDP, on the basis of the needs expressed at the various levels.
- There is a proven national epidemiological evaluation and treatment team able to detect any possible recrudescence. There are also five (5) regional teams trained in simple epidemiological evaluation.
- There is a critical mass of trained personnel
- Though insufficient for the moment, a national budgetary line item for onchocerciasis control exists.
- There is a partner, "Sight Savers International " (SSI), which supports Oncho control activities;
- Formerly fertile lands, which were abandoned, due to onchocercal endemicity, have been re-populated and developed.

5.2. **Weaknesses**

- There is yet to be technical equipment for simple epidemiological evaluation in the five (5) areas, where there are already trained teams, due to the insufficiency of financial resources.
- Insufficient financial resources for the maintenance of OCP gains.
- Insufficiency of follow-up/supervision of CDTI activities.
- Frequent transfer of already trained personnel in onchocerciasis control, to other medical structures where they are not used any more in this field. This causes a constant need for training of the newly transferred personnel.
VI. CONDITIONS TO SUSTAIN AND IMPROVE CDTI GAINS

- To obtain 100% of geographic coverage in each medical district, and at least 65% (80% in the SIZ) of therapeutic coverage in each eligible village and for each treatment session.
- To provide logistics (motor bikes) to the nurses, who do not have them, for purposes of follow-up/supervision.
- To find a solution to the issue of incentives of the distributors and health workers.
- To work out IEC material for sensitizing communities.

Epidemiological surveillance

- To equip the regions and the coordination office with evaluation kits.
- To finance the epidemiological evaluations in the villages.

Entomological surveillance

- To set up teams of village catchers at the catching points that are representative of the river basins.
- To train regional and prefectural supervisors in the other medical districts in the regions of Kara, the Central region, the Plateau and the Coastal areas.
- To re-deploy the health workers trained by OCP in onchocerciasis entomology in all the 28 endemic medical districts of the country.

Mobilization of resources

- To maintain and increase, to the extent feasible, the budgetary line item created on the national budget, allocated to health for the implementation of OCP residual activities.
- To seek other partners for the mobilization of additional resources.