

Summary report on the

**Eleventh meeting of the Regional
Programme Review Group on
Lymphatic Filariasis Elimination**

Cairo, Egypt
20–21 March 2012



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1. Introduction

The WHO Regional Office for the Eastern Mediterranean organized the 11th meeting of the Regional Programme Review Group on Lymphatic Filariasis Elimination (RPRG) in Cairo, Egypt from 20 to 21 March 2012. The objectives of the meeting were to:

- review progress of national lymphatic filariasis elimination programmes made during 2011;
- discuss country-based plan of action for 2012;
- approve drug requirements for mass drug administration in 2012; and
- discuss about opportunities to extend the operational capability of the country-based programmes.

The meeting was attended by participants from Egypt, Saudi Arabia, Sudan and Yemen, as well as representatives of Mectizan Donation Programme, the National Nutrition Institute and Ain Shams University in Egypt and Michigan State University, United States of America. Also in attendance were WHO staff from headquarters, the Regional Office and Yemen country office.

The meeting was opened by Dr Riadh Ben-Ismaïl, Regional Adviser, Control of Tropical Diseases and Zoonoses, who delivered a message from Dr Ala Alwan, WHO Regional Director for the Eastern Mediterranean. In his message Dr Alwan highlighted the importance of morbidity control in lymphatic filariasis control programmes.

The meeting was chaired by Dr Maged El Setouhy (Saudi Arabia), Chair of the RPRG.

2. Summary of discussions

Overview

The neglected tropical diseases roadmap launched in January 2012 led to the London Declaration of 31 January 2012, which included the commitment to sustain, expand and extend programmes that ensure the necessary supply of drugs and their interventions to help eliminate by 2020 lymphatic filariasis, leprosy, sleeping sickness and blinding trachoma. In order to eliminate lymphatic filariasis by 2010 there are two targets: first to stop spread of infection and second to alleviate suffering of affected cases. The global programme produced the progress report 2000–2009 and the strategic plan 2010–2020 and a manual for monitoring and epidemiological assessment of mass drug administration (MDA) to help programme managers decide when to scale down and stop MDA. Moreover, to enhance the impact of MDA, several accessory strategic approaches are being considered in different settings. These include integrating vector control (a manual for practical entomology in lymphatic filariasis will be published by the end of 2012) and integration with other preventive chemotherapy programmes (e.g. malaria, onchocerciasis, etc). It is noted that much less has been done regarding morbidity management and disability prevention (MMDP). Therefore, a manual for national lymphatic filariasis programmes is being finalized and will be published in 2012. It is expected that by 2015, all national programmes have an active MMDP component. The strategy target is that by end of 2020, 70% of countries will be verified as free of lymphatic filariasis and 30% will stop MDA and enter transmission assessment surveillance. The current situation shows that 72 countries are endemic, where 9 were removed from the list, 53 countries are under MDA or post-MDA surveillance, 3.4 billion treatments delivered to 646 million

individuals (cumulative (2000–2010)). The strategic plan includes also elements of management of morbidity and prevention of disability as well as vector control.

Country updates

In Egypt, the activities of the of lymphatic filariasis elimination programme started in 2000. Egypt had a complex situation concerning MDA. By the end of 2006, 167 villages were negative for microfilaraemia (Mf) and antigenaemia, and eligible to stop MDA. The number of endemic villages still on MDA is 29; 28 of them finished the fifth MDA round in 2011 and one village (added in 2007) will finish MDA 5 in 2012. MDA campaigns use the door-to-door strategy. The MDA round was implemented in the 29 villages in October 2011. Coverage rate was 94% of eligible population. Vector control also accompanied the campaign. The plan is to implement the first transmission assessment survey (TAS) in the 29 villages. A morbidity programme was started in 2011.

During discussions, the group noted that in 2011 the lymphatic filariasis elimination programme in Egypt carried out TAS based on detection of Mf. This action is not in concordance with WHO guidelines. Therefore, there is a need for a training workshop on TAS. During 2012, TAS needs to be initiated in the 167 villages where MDA was stopped in 2006 based on WHO guidelines. Consequently the programme needs to figure out quantities of ICT cards needed. Prior to initiating TAS (during 2012), the programme needs to implement MDA in the 28 villages which completed ≥ 5 MDA rounds and in the one village that completed 4 MDA rounds in 2011. It was noted that although the programme reported on establishing 5 centres for morbidity control, there were no details on numbers treated in different geographical regions.

Disease mapping was completed in Yemen during 2000–2002. Of 65 suspected districts, 9 (13.8%) districts were lymphatic filariasis endemic. Five rounds of MDA were implemented to cover all eligible populations during 2000–2006. Yemen used the house-to-house strategy to distribute drugs. Coverage reached 90% of total population, and 100% of geographical areas. These MDA rounds resulted in meeting WHO criteria for stopping MDA in all implementation units (IUs) of the mainland Yemen where prevalence in mainland IUs decreased to around zero%. However, the two IUs in the island of Socotra needed additional 3 rounds of MDA to achieve that goal. A pre-5th round antigen survey for children 2–4 years of age showed negative results in all endemic IUs. Transmission assessment survey (post fifth round antigen survey) for children aged 6–9 years, according to 3000 protocol showed negative results in all endemic IUs of mainland and less than 2% in Socotra island. The programme also implemented vector control activities (impregnated nets and use of polystyrene beads in Hadibo IU was integrated with MDA in Socotra) as well as morbidity management and disability management. Health education was conducted to encourage notification of clinical cases prevention of disabilities and drug ingestion. The first and second TAS were implemented in 2008 (following the old WHO protocol) and 2011, respectively. Morbidity management and disability prevention activities were integrated with leprosy. In this regard, health workers were trained to educate lymphoedema patients on foot care, resulting in significant reduction of the frequency acute attacks. Activities during 2012 include continuing morbidity management activities by searching for new lymphoedema cases, and conducting a third TAS by testing children (6–7 years of age) by ICT card. Plans include also submission of the dossier to verify absence of lymphatic filariasis transmission.

During discussions, the group noted that the second TAS (2011) did not follow WHO guidelines. It is critical to adhere to such rules as a first step in preparing the country dossier. Based on available resources, the programme in Yemen is encouraged to carry out research using molecular xenomonitoring to verify interruption of transmission.

Administratively, Sudan currently consists of 17 states. Estimation of populations is based on the census of 2009. The lymphatic filariasis elimination programme in Sudan is adopting a new strategy for decentralization and integration with the malaria control programme which will provide logistical support at Central and Peripheral levels. A new map of lymphatic filariasis in the country indicates that 4 states (Blue Nile, Gadarif, Kassala and South Kordofan) are endemic. There is an immense need to remap lymphatic filariasis in the other suspected states. Concerning the planned pilot MDA in 3 localities, drug distribution started during March in Alroseries locality (Blue Nile), during April in Abogbeha locality (South Kordofan), and in Abo Hamed (River Nile) will be integrated with the next onchocerciasis MDA. New partners in the lymphatic filariasis elimination programme include Médecins Sans Frontières, World Bank and Awrida. Partners provide logistic support such as vehicles, transportation, printing, etc. The lymphatic filariasis elimination programme is coordinating with the malaria programme as the latter has human resources in the states.

Major activities in 2012 will include: a) re-establishing the national programme steering committee and strengthening advisory and leadership teams; b) developing advocacy material (based on the one effectively used in Tanzania), and determining the status of lymphatic filariasis in 4 states based on searching clinical data and ICT/Mf surveys.

During discussions, the group noted the large distances between communities in Sudan and encouraged the programme to choose the sub-district (Al Wehda Al Edaria) as the MDA implementation unit. The group appreciated the integration approach of the lymphatic filariasis elimination programme with the malaria control programme and encouraged integration with other health programmes as appropriate. The lymphatic filariasis programme needs to develop a detailed plan of action for activities in 2012 with budget, to be communicated to the Regional Office.

In Saudi Arabia, a few old (early 1970s) clinical cases were reported in 3 areas (Aseer, Jazan and Makah). In 2002, a questionnaire survey was conducted in the three areas. The total number of positive questionnaires was 51, where 47 cases had elephantiasis and 4 had hydrocoele. The population at risk is estimated to be around 4.5 million in the three areas. It was planned to implement mapping and assess needs for MDA. It was suggested to conduct a serological survey. The plan includes selection of schools in each target area, training of health care workers and raising awareness of the community. Plans for 2012 include health education, training workshops on performing ICT and school surveys for lymphatic filariasis mapping.

During discussions, the group noted that a total of 5000 ICT cards are needed for mapping all suspected areas using a LQAS in school students (at least 15 years old). The KSA trust fund can be used to support the lymphatic filariasis programme. A detailed plan of action (for activities in 2012) with budget should be developed and communicated with the Regional Office.

Technical issues

Morbidity control is crucial for reaching the overall elimination goal. There are several forms of lymphatic filariasis morbidity, including hydrocele (causing sexual dysfunction), limb pathology, acute attacks, sub-clinical changes, psychosocial issues and poor quality of life (economic impact). Although recent research has advanced our knowledge for understanding of the pathology of lymphatic filariasis, much is still unknown. Symptoms may be acute or chronic in nature, which results from presence of adult worms residing in the lymphatics. Worms cause inflammatory host response leading to lymphatic dysfunction, but not blockage of lymph vessels. Secondary bacterial infections have been implicated as an important mechanism for pathology associated with lymphatic filariasis. It has been shown that MDA has positive effect on clinical disease (fewer acute attacks, less skin disease) which in return resulted in advocacy for taking the drugs. At the same time, ignoring clinical cases can have unwanted negative effects. Different chemotherapeutics (antibiotics, anthelmintics, wound healing and skin care) are available to help patients. A new WHO morbidity manual will be available in 2012. It would guide lymphatic filariasis elimination programmes to assess disease burden in the country, provide training to medical staff, and initiate specialized clinical centres. The centres would supply care packages and provide surgical support (hydrocele) and rehabilitation and psychological assistance. One measure of success is at least vast reduction in number of new clinical cases or no cases.

Molecular xenomonitoring (MX), so far, remains a research tool. Furthermore, MX has not been used in areas where mosquitoes other than *Culex* species are lymphatic filariasis vectors. Two mosquito sampling methods were used including collection of indoor resting

mosquitoes, and trapping of gravid mosquitoes using traps distributed throughout the geographical sectors of study villages. The second method proved more efficient in collection of optimal (thousands) numbers of mosquitoes needed for large-scale assessment of lymphatic filariasis elimination programmes. Available data indicate that MX is likely to be more sensitive than Mf testing for detecting residual filarial infections in communities following MDA. More research is needed to: a) find ways to make MX more practical for use by elimination programmes, including technical improvements in mosquito sampling protocols and DNA isolation and polymerase chain reaction (PCR) testing; and b) evaluate and validate the newly developed molecular assay for specific detection of infective filarial larvae in mosquito pools.

Integrating vector control with MDA campaigns can help to ensure lymphatic filariasis elimination. Tools for personal protection, control strategies and/or methods directed against immature and adult stages were discussed. A WHO manual for practical entomology in lymphatic filariasis will be published during 2012. Integrating vector control with MDA would accelerate and sustain interruption of lymphatic filariasis transmission. Making vector control a part of the global strategy for lymphatic filariasis elimination is likely to reduce the number of MDA cycles required to interrupt transmission and to prevent re-emergence where interruption has been achieved. However, field studies are now required to empirically test such hypothesis.

Participants of the 11th RPRG meeting suggested holding the 12th RPRG meeting 2012 in Khartoum, Sudan. Participants of the 11th RPRG meeting agreed to propose Professor Reda Ramzy as a new Chair for the RPRG to the Regional Director for his kind approval.

3. Recommendations

To all countries present

1. Include morbidity management in proposals and report to the next RPRG meeting on activities implemented in this element of the filariasis programme.
2. Finalize proposals for implementation of interventions with action plans, budgets, roles of partners, contribution by ministries of health and required quantities of ICT cards and drugs and send them to the Regional Office by 15 April 2012.
3. Implement research on xenomonitoring as well as on some parts of TAS which may need further investigation.

To specific countries

4. Sudan: complete remapping of four states by the end of 2012.
5. Yemen: implement TAS (3) in all the country (mainland and Sokotra island) by the end of 2012 or early 2013.
6. Saudi Arabia: map the suspected areas at the borders with Yemen (Aseer and Jazan) in addition to Makkah by end of 2012.
7. Egypt:
 - 7.1 Implement TAS (2) for villages that ended MDA (5) in 2006, before end of 2012.
 - 7.2 Implement MDA (6) for villages that ended MDA (5) in 2011, during 2012.
 - 7.3 Implement MDA (5) for the one village that had MDA (4) in 2011, during 2012.
 - 7.4 Implement TAS (1) for villages that ended MDA (5) in both 2011 and 2012 (i.e. 7.2 and 7.3 above) by the end of 2012.

To WHO

8. Provide as much support as possible in terms of ICT cards, technical support, seed money if necessary, drugs, etc. to countries in order for them to implement the agreed proposals within 2012.
9. Organize training on TAS by September 2012, to be held in Egypt and attended by trainees from both Egypt and Yemen.