



**World Health
Organization**

**WHO Annual meeting on Buruli ulcer
22–24 March 2010
WHO Headquarters, Geneva, Switzerland**

Summary report

Epidemiology

National control programmes report improved documentation and reporting of Buruli ulcer cases using WHO standard forms. However, the numbers indicate continued gross underreporting in many countries (possibly reflecting inadequate funding and limited control activities in some areas). In future, national programmes must improve detection, documentation and reporting of cases. Funding agencies should try to extend assistance to other endemic countries to improve knowledge of the disease in these areas.

The presentation from Japan further confirmed that Buruli ulcer is not limited to tropical areas but can occur in countries in temperate climate zones, as has been known for years from southern Australia. This encouraging epidemiological information will further understanding of the global distribution of the disease. Understanding of the situation in Asia and Latin America remains unclear (see *Map*) but is expected to improve through the activities of various nongovernmental organizations and research groups.

Experience and expertise from the Guinea Worm Eradication Programme will be used to develop capacity for mapping Buruli ulcer cases at country, district and community levels.

Laboratory confirmation of cases

For the first time, laboratories involved in case confirmation reported their activities and results. Of encouragement is that countries are making efforts to confirm cases by polymerase chain reaction. In 2010, WHO will issue a standard template for laboratory reporting. It is hoped that the working group of the laboratory network will foster greater cooperation and mutual support to advance work on case confirmation, including capacity building and quality control. National control programmes and nongovernmental organizations should contribute to laboratory confirmation of cases as part of control activities. Currently, the costs of case confirmation are borne principally from research funds, which may not be adequate to meet the new requirements for this activity.

Antibiotic treatment

The article published in the *Lancet*¹ supports the finding that a combination of rifampicin and streptomycin is efficacious; and suggests that oral treatment might work but should be proven in rigorous scientific studies. Various proof-of-principle studies on oral treatment presented during the meeting show promise. In view of this information, the WHO Technical Advisory Group recommends that a randomized controlled trial be conducted to assess whether oral treatment should be formally endorsed. A working group has been set up to develop a protocol for this study, and it is expected that all partners will support the implementation of this important global priority. In the meantime, provisional WHO guidance² on the use of antibiotics is being updated to reflect the knowledge gained with antibiotics since 2004.

Prevention of disabilities

Recognizing the progress made and challenges remaining in integrating activities for prevention of disabilities into national control programmes, it was agreed that an international meeting should be held to define ways of implementing this intervention in countries. The meeting will be held during the second half of 2010 and involve national programme managers, national focal points, experts and nongovernmental organizations. The venue and dates have yet to be determined.

Surgery

Various presentations highlighted the need to reinforce surgical capacities in endemic countries. The type of surgery required today in the context of antibiotic treatment is different from that required in the past, when surgical debridement was the standard treatment and involved wide and extensive excisions followed by skin grafting. Today, surgery is still needed for late and extensive cases (mostly Category III and some Category II cases) and for the correction of deformities. A sub-working group on surgery will help to define the surgical management of cases and guide training and investment.

Decentralization

Presentations demonstrated that treatment of patients in the primary health-care system (that is, in health centres) is possible provided that there is a good system for early detection of cases and strict supervision of patients. Future strengthening of the health system should focus on the primary health-care level by ensuring the availability of good facilities for wound care at the health centre level (basic equipment for sterilization and adequate provision of dressings) and transportation (motor-bikes) to allow follow up of patients or delivery of care in endemic villages far from health centres.

¹ Nienhuis WA et al. Antimicrobial treatment for early, limited *Mycobacterium ulcerans* infection: a randomised controlled trial. *Lancet*, 2010, published online Feb 4. DOI:10.1016/S0140-6736(09)61962-0.

² *Provisional guidance on the role of specific antibiotics in the management of Mycobacterium ulcerans disease (Buruli ulcer)*. Geneva, World Health Organization, 2004 (WHO/CDS/CPE/GBUI/2004.10); available at http://whqlibdoc.who.int/hq/2004/WHO_CDS_CPE_GBUI_2004.10.pdf and <http://www.who.int/buruli/information/antibiotics/en/index.html>; accessed April 2010).

Yaws

Yaws was one of the first diseases to be tackled by WHO and UNICEF during massive campaigns carried out from the 1940s to the 1970s. After a successful reduction in the number of cases by 95% (50 million cases at the time of the campaigns), the disease disappeared from the public health agenda and formal reporting to WHO stopped. Cameroon, Congo and Ghana made presentations during the meeting; the disease may still exist in other countries in Africa, Asia, Latin America and the Western Pacific but cases have not been reported so far. Activities to control Buruli ulcer, especially early case detection, might provide an opportunity for surveillance and control of yaws at little or no additional cost. Treatment of yaws requires only a single injection of cheap benzathine benzylpenicillin, which leads to cure.

Buruli ulcer and HIV coinfection

Cameroon presented its interesting work on Buruli ulcer and HIV coinfection, which challenged the notion that coinfection with HIV may not be a significant issue in Buruli ulcer. This work has stimulated interest; further work is needed to understand the epidemiology and pathology in coinfecting patients and their management and to study the response to antibiotics and antiretroviral therapy, surgery (skin grafting) and recurrence of infection. The clinical presentations of Buruli ulcer in HIV infected patients should also be better understood.

Environmental studies

The Technical Advisory Group agreed during its meeting that standard guidelines for environmental sampling were needed to obtain comparable results from different studies. It also agreed to continue work on the external quality assessment programme for the detection of *Mycobacterium ulcerans* in various environmental samples. The working group on transmission will address these issues.

Buruli ulcer research

Outstanding presentations were made on new research developments. The Buruli ulcer community welcomes various initiatives to advance research and hopes that better coordination will produce a greater impact. In the short-to-medium term, improvements in antibiotic treatment and the possible development of a diagnostic test(s) remain the priorities in facilitating the management of patients. It is hoped that the encouraging information on mycolactone and work on developing a test for its detection will lead to some practical applications in rural health facilities in the future. In the medium-to-long term, greater understanding is expected about where the organism lives and how it is transmitted to humans (and some animals). The availability of a vaccine – either through specific research on developing a Buruli ulcer vaccine or from vaccine development for tuberculosis – would provide a cost-effective way of preventing the disease.

WHO working groups

Given the excellent progress made in various aspects of Buruli ulcer control and the need to further progress, it was agreed to establish working groups on different aspects of the disease (as attached). These working groups are expected to provide new ways of international cooperation beyond traditional collaborations and to help define and advance work on key global priority areas. In addition to the core group of selected members, people may sign up to the virtual e-mail discussions fora depending on their interests and expertise. Other working groups will be established as the need arises.