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REPORT

3rd WHO Advisory Group Meeting on Buruli ulcer

1–3 March 2000
WHO Headquarters, Geneva

CONTENT

INTRODUCTION

Background

Mycobacterium ulcerans infection (Buruli ulcer) has rapidly emerged as an important cause of human morbidity around the world. The following countries have reported or suspected cases to date: **Africa:** Angola, Benin, Burkina Faso, Cameroon, Congo, Côte d'Ivoire, Democratic Republic of Congo, Equatorial Guinea, Gabon, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo, Uganda, Sudan; **Americas:** Bolivia, French Guiana, Mexico, Peru, Suriname **Asia:** China, India, Indonesia, Malaysia, Sumatra and **Western Pacific:** Australia, Kiribati, Papua New Guinea.

Buruli ulcer is the third most common mycobacterial disease of non-immuno-compromised persons after tuberculosis and leprosy. The mode of transmission is not known. The disease generally affects impoverished inhabitants of remote rural areas with limited access to modern medical care. Most patients present late to the health services. About 70% of those affected are children under the age of 15 years. Buruli ulcer often starts as a painless nodule, which if left untreated, frequently leads to massive skin ulceration followed by debilitating complications. Currently, surgery is the treatment of choice but there are several limitating factors including: 1) inadequate surgical facilities in rural areas in the developing world; 2) high treatment costs; 3) recurrences after surgical treatment; and 4) the risk of transmission of infections such as HIV during surgery. Unfortunately, treatment with antibiotics has thus far been disappointing. The current social and economic burden imposed by Buruli ulcer on patients, their families and the health services is considerable.

In response to the growing spread and impact of Buruli ulcer, the World Health Organization (WHO) in 1998 established the Global Buruli Ulcer Initiative (GBUI) with the aims of raising awareness about this disease, mobilizing support to assist affected countries to deal with the disease, promoting and coordinating research, and coordinating the work of nongovernmental organizations (NGOs) and other partners. In February 1998, the first meeting of the Task Force (now called Advisory Group) consisting of some selected members was held in Geneva. A full membership of the Advisory Group has now been established consisting of 16 people whose expertise covers clinical and surgical intervention, epidemiology and research. The second meeting of this group was held in March 1999 in Geneva.

Objectives of the meeting

1. To define the research agenda for Buruli ulcer;
2. To define modalities for surveillance, surveys and estimation of the burden of the disease;
3. To define modalities for the use of drugs for the prevention of recurrences; and
4. To define training needs for Buruli ulcer.

Expected outcome

Recommendations to guide WHO's work on Buruli ulcer in the areas outlined in the objectives.

Welcome remarks

Dr David Heymann, Executive Director, Communicable Diseases welcomed and thanked all participants for attending the meeting. He presented an update on the reorganization at the WHO. The Buruli ulcer activity is now under the Department of communicable Disease Prevention and Control. He reiterated WHO’s commitment to the Buruli Ulcer Initiative. He thanked The Nippon Foundation for providing financial support to the Initiative since its establishment in 1998 and also for the recent commitment to provide funds to cover Buruli ulcer activities up to 2002. He also thanked other partners who have joined the efforts to deal with the Buruli ulcer as a public health problem.

Dr Heymann emphasized the importance of obtaining the epidemiological and economic data needed to justify the efforts we are all putting into the disease. He stressed the need to find drug treatment for the disease given the problems associated with surgical treatment. In his concluding remarks, he was optimistic that the meeting will yield the recommendations needed to accelerate global efforts to fight the disease and wished the participants a successful meeting.

Dr Maria Neira, Director of the Department of Communicable Diseases Prevention and Control presented an overview of the Department's activities. She stressed the need to integrate some of the activities of various disease control activities. Through such collaborations, more can be achieved with the same resources. Dr Neira officially launched the WHO monograph on Buruli ulcer.

RECOMMENDATIONS

Group 1 – Research priority areas

1. **Establish a Web Page**: Global Buruli ulcer site (moderator: *Kingsley Asiedu*)

   Purpose:
   - encourage collaboration
   - names
   - list of current projects
   - link with: 1. the Institute of Tropical Medicine, Antwerp
     2. list of publications (Medline)

   Newsletter (*John Hayman*)

2. **Genome sequencing**
   Sanger center/St George's Hospital,
   Welcome Trust/WHO (*Jacques Grosset & Mark Wansbrough-Jones*)

3. **Reference culture collection**
   All cultures to be sent to Institute of Tropical Medicine, Antwerp, Belgium (*Françoise Portaels*)

4. **Tissue repository** at AFIP, Washington DC, USA (*Wayne Meyers*)

5. **Establishment of collaborating centres to support research and training** (*WHO*)

6. **Artificial ecosystems** (*different centres*)

7. **Human response to infection**
   Serological response—serum bank (*Harold King*)
   Cell mediated response
   Vaccine development: avirulent live vaccine

8. **Gene expression library**

9. **Development of finger-printing system** (based on PCR, as in TB)
   HLA susceptibility