DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control

Memorandum

Date .August 30, 1985

From Dracunculiasis Group, CDC

Subject GUINEAWORM WRAP-UP #9

To Addressees

INTERNATIONAL ACTIVITIES

AFRICAN REGIONAL CONFERENCE ON DRACUNCULIASIS

The African Regional Office of WHO, in association with several co-sponsors, is completing plans to convene a regional meeting on control of dracunculiasis. The meeting is expected to be held in late 1985. Its objectives are:

- To review the current status of dracunculiasis with particular reference to its occurrence, distribution, surveillance, control, and socioeconomic impact;
- To assess the feasibility of the control of dracunculiasis as part of primary health care and water sanitation projects;
- To prepare guidelines for plans of action for national control programs;
- To identify applied research activities needed to improve control activities; and
- To develop a plan for follow-up action in the endemic countries (of Africa) and, through AFRO/WHO, to monitor and support more effective anti-dracunculiasis action in the context of primary health care and the water supply and sanitation decade.

The dates and location for this meeting should be available in time for inclusion in Guineaworm Wrap-Up #10.

FRANCE ASSISTS BENIN

The French agency ORSTOM (Office de la Recherche Scientifique et Technique d'Outre-Mer) assigned an epidemiologist to Benin earlier this year to begin a multi-year fulltime assignment in connection with local efforts to conduct research on and control of dracunculiasis.

NATIONAL ACTIVITIES

INDIA

The annual Guineaworm Workshop and Task Force Meeting of the Indian Guineaworm Eradication Program met at Bangalore in July 1985. The national total of cases declined by 9.8 percent (44,819 to 40,443) from 1983 to 1984. A target was established for complete treatment of all drinking water sources in endemic areas of India with temephos (Abate) by the end of 1985. It was also reported that UNICEF has begun a project for converting step wells into draw wells in two of the five most heavily endemic districts in Rajasthan. At the World Health Assembly in Geneva in May 1985, India's representative noted the progress his country had made in its eradication program, announced that the target date for eradication in India is the final year of the water and sanitation decade (1990), and offered to make available India's technical experience to other interested endemic countries.

GUINEA

At the January 1985 meeting of the WHO's Executive Board, the Minister of Health of the Republic of Guinea said that "considerable progress had been made in the control of Guinea-worm (in his country) through the supply of safe drinking water, which was the key to the problem." This is the first confirmation that dracunculiasis exists in Guinea in recent years. The residual endemic areas, said to be much less now than in the 1960's, are in the northeastern parts of the country adjacent to Mali.

TOGO

The International Development Research Centre (IDRC) of Canada is sponsoring a three-year research project which is about to get underway. The project, which will be conducted by a team from the Universite du Benin, will study the impact of providing safe drinking water to a hyper endemic area of more than 60,000 persons.

BURKINA FASO

Dr. T.R. Guiguemde of the Centre Muraz is completing a four-year evaluation of the efficacy of health education and provision of safe drinking water for controlling dracunculiasis in three villages. Provisional results so far show that, between 1983 and 1984, providing wells alone was associated with reduced prevalence of dracunculiasis from 37 percent to 1.5 percent in one village, while health education alone was associated with a decline in prevalence from 24 percent to 3.5 percent in one village and from 54 percent to 8.4 percent in another village. Surveys being conducted in 1985 will evaluate the combined effect of health education and having wells in all three villages between 1984 and 1985. These studies are being supported in part by USAID/SHDS and WHO/AFRO.

RESEARCH

During the Nigerian National Conference on Dracunculiasis in March 1985, two observers noted, independently of each other, that one or more villages in endemic areas remained relatively free of dracunculiasis, in association with the presence of considerable numbers of tadpoles and/or frogs in the ponds used as their sources of drinking water. Guineaworm Wrap-Up has since learned that in North America, frogs (Rana pipiens) have been implicated in serving as paratenic hosts of Dracunculus insignis (see Crichton, V.F.J. etal, 1977. Observations on the seasonal prevalence, pathology, and transmission of Dracunculus insignis in the Raccoon in Ontario. Journal of Wildlife Diseases, 13:273-280). It appears that frogs and tadpoles ingest infected copepods; the larvae remain viable in the frogs for extended periods; raccoons eat the frogs, whereupon the larvae resume their development to adult guinea worms in the raccoons. Could it be that frogs and tadpoles are potential allies in our struggle against copepod vectors of D. medinensis?

There is still much to be done in the control of dracunculiasis. High priority research areas include investigation of: the efficacy of diethylcarbamazine or ivermectin as prophylactic or therapeutic treatments for immature or mature Dracunculus parasites; the agricultural impact of dracunculiasis (agricultural output of the same villages before and after control of guinea worm, or a comparison of otherwise comparable affected and unaffected villages); water contact studies to document what specific groups of infected persons contaminate village water sources, etc.; investigations of serological methods for diagnosing prepatent cases of dracunculiasis; comparison of the efficacy of different surveillance techniques. (A potential source of funding for latter surveillance studies is the Grants in Rapid Epidemiologic Assessment for Health Planning and Decision Making. For further information on these grants, interested readers should write Dr. Michael P. Greene, Associate Director, Board on Science and Technology for International Development, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418 U.S.A.).

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