

## The Final Hurdle To Be Crossed In The Eradication Of Dracunculiasis In Nigeria.

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**Abstract:** The guinea worm disease, dracunculiasis, was targeted for elimination in several countries with the hope of global eradication before the end of 1995. This eradication deadline was not met and WHO then hoped to certify eradication by 2005. At the 2006 World Health Assembly(WHA) in Geneva, the World Health Organisation(WHO) convened an informal meeting on the eradication of dracunculiasis and additional measures needed to stop transmission of the disease in all of the remaining endemic countries by the end of 2009 was discussed. Several countries have been certified as guinea worm disease free, however cases continue to be reported in Nigeria. This short report highlights importation as the major impediment to eradicating the disease in the country. [Journal of American Science 2010;6(2):87-88]. (ISSN: 1545-1003).

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### Introduction

Dracunculiasis, a disabling, painful, debilitating, water-borne helminthic disease with multiple adverse consequences on health, agriculture, school attendance, and the overall quality of life of the affected communities predominates among the rural communities of many developing countries whose population depend upon unprotected water sources for drinking. Key intervention strategies to eradicate dracunculiasis are safe water supply, vector control using abate, health education and case management.

In 1986, WHO designated dracunculiasis as the next disease scheduled to be eradicated by 1995 after smallpox (Hopkins and Ruiz-Tiben, 1991). This eradication deadline was not met and WHO then hoped to certify eradication by 2005. At the 2006 World Health Assembly (WHA) in Geneva, WHO discussed additional measures needed to stop transmission in all of the remaining endemic countries by the end of 2009 (CDC, 2006). Several countries have been certified guinea worm disease free, however cases continue to be reported in Nigeria (CDC, 2001). 690 Nigerian villages reported cases in 2001 and in 2007, only 32 cases were reported and just as Nigeria was preparing to cross the finish line to interrupting transmission nationwide an unexpected outbreak of dracunculiasis was discovered (CDC, 2007).

### Guinea worm disease outbreaks

The 2007 outbreak was in two villages in Enugu State (CDC, 2007). Investigations revealed 28 active cases in Ezza Nkwubor village, and 2 cases in Ezza Ugwuomu village

nearby. The latter two patients, a mother and her child, had just come from the first village. Ezza Nkwubor is inhabited exclusively by Ezza people who migrated from Ezza speaking communities in Ebonyi State. The source of the outbreak in Nkwubor village is believed to be a village in Ezza North LGA of Ebonyi State, which had a major outbreak in April 2005 and 3 cases in February 2006, and from which some persons migrated to Ezza Nkwubor village. The Ezza people are renown farmers, who migrate over large distances, and they have been implicated as having imported guinea worm disease into communities several times during the eradication program. Enugu state had never been endemic since the state was created in the 1990s.

Not so recently, CDC(2006) also reported an imported case of dracunculiasis in a village in Zamfara state, North-East Nigeria in May 2006. Transmission of dracunculiasis from the patient, a male farmer, was not contained. Zamfara state has not reported indigenous cases of dracunculiasis before January 2004. The probable origin of this case of dracunculiasis remains to be ascertained.

During the course of my studies on the epidemiology and control of the guinea worm disease in villages in Oyo state, south-west Nigeria, I witnessed an outbreak in Olomi-tutu village in 1994. The village had 27 households with a population of 215 people. Almost all the permanent residents were Yoruba. The main source of income was subsistence agriculture.

There were no schools, health centres and no potable water supply. The village depended for water on dug-holes in the dry season and on an

abandoned fish pond in the village during the rainy season. Since the dug-holes were quite far from the village centre necessitating a walk of a mile or more, farmers generally filled their kegs from these holes on their way to and from the farms. Water for domestic purposes was obtained at one or two days interval.

#### *Report Of An Outbreak*

No cases had been reported in Olomi-tutu village since case searches in the 80s. Older villagers stated it was the first time they were experiencing guinea worm infection after about 40 years and reported that an infected man visited their village the preceding year. Where the man came from was not ascertained. On the 14th of January, 1994, a letter dated 13/1/94 was received by the Director of Personnel Management at the Local Government Headquarters from Olomi-tutu village stating their need for medical assistance to combat a serious guinea worm epidemic. The Assistant Guinea worm Coordinator and I paid a visit to Olomi-tutu on the 18th of January, 1994.

#### *Findings, Treatment And Interventions*

The muddy fish pond was inspected. The villagers were told to clear the debris-covered surface of pond and erect wooden planks where person drawing water could stand instead of wading into the water. These they did before our next visit.

We returned on Friday 21st January 1994 with more health officials. The infected parts of the body, mostly legs, were immersed in water when there is a lesion so that the worm can protrude and be wound on a stick. The sites of infection were cleaned with an antiseptic and bandaged to prevent worm from retracting and villagers from dipping the affected part in pond water. Panadol, multivitamins, procaine penicillin injection were given to infected villagers, one filter lid to a household were given to villagers. The pond was treated with chloride of lime. Small health educational bills written in the local language were given to villagers to educate them on the guinea worm disease. The villagers were instructed to boil and filter drinking water and prevent infected people from wading into pond.

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This village and two other infected villages in the Local Government Area were included in my study. Incidence of infection in the three villages was 8.5% in 1994, 3.9% in 1995 and 0.5% in 1996. In all, 78(14% of total population in the three villages) persons were infected. Cases were presented between September and March. Most(67.1% ) of the new cases and highest percentage of freshly emerging worms occurred between January and February (Morenikeji and Odaibo, 2007).

#### **Conclusion**

Importation is the main reason for the continued presence of the disease in Nigeria. There is need to make health education cover infected and at-risk non-infected communities and for continued unwavering energy input of all agencies committed to the struggle as cases decrease so that the 2009 deadline can be met.

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