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Commentary

Exploring the Causes and Consequences of Lymphatic Filariasis Resurgence

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DESCRIPTION

Malaria, Lymphatic Filariasis and tuberculosis are examples of re-emerging infectious diseases, which are diseases that once posed significant health risks to a significant number of people worldwide or in a particular nation. However, these diseases have recently returned to posing health risks to a significant number of people. One of the most common vector-borne diseases in sub-Saharan Africa is Lymphatic Filariasis (LF), which is caused by infections with *Wuchereria bancrofti*. It is also the second leading cause of disability worldwide after lymphoedema, elephantiasis, and hydrocele [1]. More than 120 million people worldwide suffer from LF, with approximately 40 million afflicted with disfigurement or disability. It is estimated that nearly six million people in Tanzania suffer from debilitating symptoms of the disease [2]. Adult worms build a home in the lymphatic vessels, disrupting the lymphatic system's normal function. The worms can live anywhere from 6 to 8 years and, during that time, produce millions of microfilaria (immature larvae) that infect vector mosquitoes and circulate in the blood.

Recognizing the economic impact, disability, and social stigma of LF, as well as the availability of infection control and morbidity management strategies. In the year 2000, the Global Program to Eliminate Lymphatic Filariasis (GPELF) was launched by the World Health Organization (WHO) [3]. Mass drug administration of preventive chemotherapy with Albendazole (ALB) and combination therapy with Ivermectin (IVM) or Diethyl Carbamazin Citrate (DEC) was the foundation of the strategy. Morbidity management for those who had already been affected was also a part of the plan. The mix of IVM in addition to ALB is utilized in areas of Africa where Onchocerciasis (waterway visual impairment) is co-endemic with LF [4] in light of the fact that, DEC is known to sidely affect Onchocerciasis patients, for example, discombobulating, sickness, fever, migraine, prompt hypersensivity responses and muscles or joint agonies. Because it reduces the number of microfilaria and the number of infections in the community, MDA treatment was advocated. It was thought that annual MDA would eventually result in the infection's elimination by keeping microfilaria density at very low levels. Furthermore, it was anticipated that transmission would be completely disrupted after six rounds of MDA with coverage of 65%-70% of the target population [5].

Indeed, there have been reports that the global transmission of LF has decreased since the MDA programs began. As a result, sixteen nations are now recognized as having eradicated lymphatic filariasis as a public health issue. Moreover, WHO revealed that, around 597 million individuals never again require preventive chemotherapy [6]. In spite of these successes, there have been reports of ongoing MDA transmission for over a decade in some areas. For instance, in districts in Ghana where the baseline prevalence was relatively high, 14 rounds of MDA did not stop the transmission of LF [12]; After 15 rounds of MDA, there was evidence of LF transmission continuing in Tanzania's Mafia Islands [7]. Low drug uptake the presence of epidemiological hotspots, and systematic non-compliant individuals who could potentially serve as reservoirs of infection are all linked to the continued transmission of LF [7]. However, it is known that a number of factors influence MDA compliance, including: as previously reported fear of side effects, a general dislike of taking medications, low motivation among drug distributors, ignorance of the disease in question, and inadequate communication regarding the rationale of MDA are all contributing factors [8].

In the Masasi district, LF elimination efforts began in 2012, with subsequent MDA occurring from 2012 to 2019. According to an unpublished National NTDs report, drug treatment coverage was generally higher during this time, ranging from 92 to 93 percent. A recent study [9] indicates that vector populations have a low infection rate of 0.5%; however, Masasi District has no published information regarding the human infection status of *W. bancrofti*. As a result, the purpose of this study was to assess the human infection status, compliance with MDA, and reasons for noncompliance [10].

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