

Employing Triple-Drug Therapy to Expedite the Process of the Global Elimination of Filariasis

INTRODUCTION AND MAGNITUDE OF THE DISEASE

Lymphatic filariasis is a vector-borne neglected tropical disease of parasitic origin and is a major public health concern.^[1] In fact, the available global estimates suggest that more than 35 million people are suffering from the chronic manifestations (such as lymphedema, disability, and hydrocele) of the disease.^[1,2] In addition, currently in excess of 850 million people residing in 52 endemic nations are in need of prophylactic chemotherapy, while close to 500 million people no longer need the same owing to the implementation of the recommended strategies.^[1,2] However, the disease accounts for the loss of millions of dollars due to reduced productivity and even cast a major burden on the health system.^[1]

ELIMINATION OF THE DISEASE

Acknowledging the magnitude of the disease, associated long-term complications, and presence of cost-effective drugs to contain the disease, the World Health Organization (WHO) decided to globally eliminate the disease by 2020.^[1-3] This can be achieved by interrupting the chain of transmission through mass drug administration (MDA) (viz., albendazole and diethylcarbamazine citrate) once in a year to all eligible persons living in an endemic region, and by minimizing the sufferings by mounting a better approach toward the management of morbidities.^[1-3] In addition, efforts have been taken to improve the quality of life of patients with chronic manifestations such as surgical intervention for hydrocele and management of lymphedema and hydrocele.^[1] Further, based on the involved mosquitoes, steps have been taken for vector control as well.^[1]

PROGRESS MADE

Owing to the successful implementation of the above measures in the endemic nations, significant progress has been made in the direction of eliminating the disease.^[1] In fact, 20 endemic nations have succeeded in minimizing the level of infection below elimination and thus have discontinued prophylactic chemotherapy.^[1,3] Further, since the start of the current century, more than 6.5 billion treatments have been administered to interrupt the transmission of infection.^[1,4] However, 22 of the endemic nations have still

not been successful to initiate MDA throughout the nation.^[4] Furthermore, some of the nations are now getting suboptimal results despite having five cycles of MDA, which is indirect evidence that the disease cannot be eliminated globally using the existing drug therapy.^[4]

TRIPLE-DRUG THERAPY

Keeping this in mind and based on the evidence obtained from studies, the WHO recommended an alternative three-drug treatment (combination of ivermectin, diethylcarbamazine citrate, and albendazole) to accelerate the process of global elimination.^[4,5] The addition of ivermectin to the other two approved drugs has been found to be more effective in clearing microfilaria from the blood and is equally safe when compared with the two-drug therapy.^[5] The triple-drug therapy is recommended once in a year, and it is anticipated that it will aid in improving the impact of the program and will also prevent more than 500 millions of people from acquiring the disease.^[4,5] Further, the triple-drug therapy has a definite scope in 24 nations which are currently using two-drug therapy and in those endemic nations which have not initiated MDA in all districts.^[5] Nevertheless, not much can be accomplished unless the health sector succeeds in improving the compliance among all eligible individuals.^[4,5]

CONCLUSION

The recently recommended triple-drug therapy is a definitive approach for the benefit of millions of people and is also a cost-effective option to accelerate the global elimination of the disease.

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