Vaccine against malaria on test trial

By Elvis Basudde

The vaccines against malaria have been the object of constant endeavour by the scientific community and pharmaceutical industries for over three decades, with little success so far. Even doctors from the National Malaria Control Programme, at the Ministry of Health, have expressed pessimism, saying currently the scientific team in Uganda is not having any success story in terms of developing an in country malaria vaccine.

Both Dr. Myers Lugemwa and Dr. Daniel Kyabayinze, from the National Malaria Control Programme for a malaria vaccine, it has not been an easy journey the reason it has taken a long time to come up with a vaccine.

The reason malaria vaccine has eluded medical science for decades is because the malaria parasite, plasmodium falciparum, is a deadly organism for which many options for developing a vaccine are not as easy as those other smaller organisms from which vaccines have been developed, says Kyabayinze.

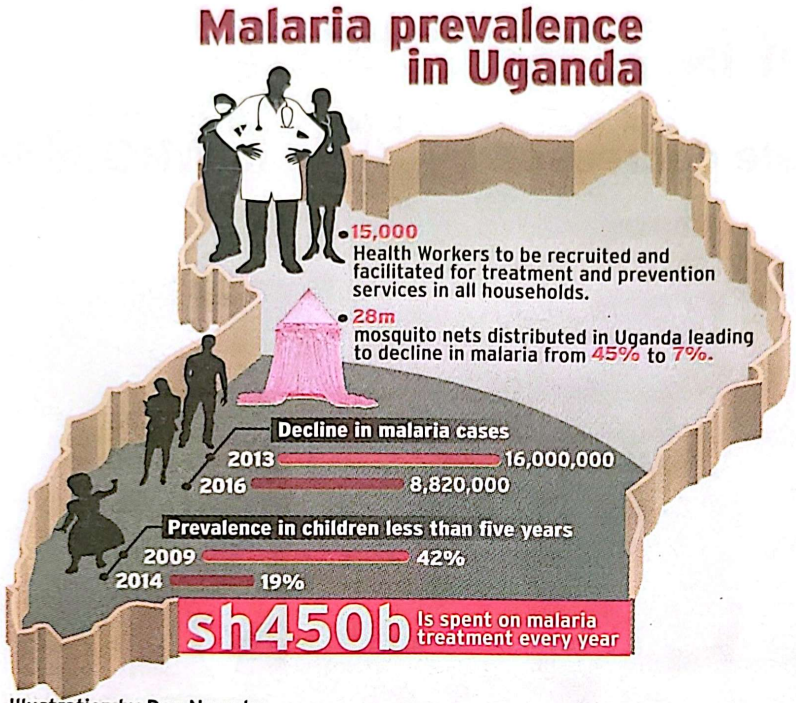

Illustration by Dan Nsereko

Lugemwa defines a vaccine as a drug that is given for the prevention or control of a disease before it occurs in an individual For example, when you give measles vaccine, you are trying to prevent measles from attacking children in the future. However, some progress has been made in 2018 in three sub-saharan countries (Kenya, Ghana, and Malawia), were chosen to test the world's first vaccine against malaria through a pilot programme.

Under the Malaria Vaccine Implementation Programme (MVIP), a vaccine named RTS,S was rolled out in these three countries, and it targets infants of 6 to 12 weeks. The drug is at least 50% effective against severe malaria and it protects for one year.

Kenya, Ghana and Malawi were chosen for the vaccine pilot because all have strong prevention and vaccination programmes, but continue to have high numbers of malaria cases, Lugemwa said. The countries will deliver the vaccine through their existing vaccination programmes.

The vaccine has already progressed to the Phase 3 clinical trial. Most clinically advanced malaria vaccines should be ready for use in three to five years after the phase three trials, says Kyabayinze.

In 2006, the International Community set a goal of having a malaria vaccine by 2025. Lugemwa says there are excellent prospects of meeting the target since the RTS, S vaccine trials have now reached the fourth phase. After the trials, WHO will review its position and a final decision on whether to recommend deploying the vaccine more widely.

However, the malaria vaccine will not replace other current interventions in malaria control; it will act as a complement because there is no single magic bullet that can eliminate malaria. Other interventions like bed netting and insecticides must come on board, says Lugemwa.

Malaria is one of the world's deadliest diseases, infecting more than 200 million people worldwide every year and killing about half a million every year, most of them children under the age of five in Africa. Pregnant women and people living with HIV are also at a high risk of infection. Malaria spreads when a mosquito bites someone already infected, sucks up blood and parasites, and then bites another person.

WHO is hoping to wipe out malaria by 2040 despite increasing resistance to both drugs and insecticides used to kill mosquitoes. Statistics from the Ministry of Health show that malaria is still the leading cause of death in Uganda, accounting for over 27% of deaths. The statistics also show Uganda has the world's highest malaria incidence, with a rate of 478 cases per 1,000 population per year.

Uganda ranks as 6th among African countries with high malaria-related mortality rates.

A study published last year by the American Journal of Tropical Medicine & Hygiene showed that malaria is still the major cause of death in Uganda with approximately 70,000 to 100,000 Ugandans dying each year.

World Health Organization