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Singapore: The world's first malaria vaccine may be available by October, as the vaccine candidate (RTS,S/AS01) is the first to reach phase III clinical testing and is partially effective against the clinical disease in young African children up to four years after vaccination.

The RTS,S/AS01 vaccine was developed for use in sub-Saharan Africa where malaria still kills around 1,300 children every day. There is currently no licensed vaccine against malaria anywhere in the world.

The final trial data is published in The Lancet journal.

The results suggest that the vaccine could prevent a substantial number of cases of clinical malaria, especially in areas of high transmission. Protection was prolonged by a booster dose, increasing the average number of cases prevented in both children and young infants.

"Despite falling efficacy over time, there is still a clear benefit from RTS,S/AS01. An average 1,363 cases of clinical malaria were prevented over 4 years of follow-up for every 1,000 children vaccinated, and 1,774 cases in those who also received a booster shot. Over 3 years of follow-up, an average 558 cases were averted for every 1,000 infants vaccinated, and 983 cases in those also given a booster dose," said Mr Brian Greenwood, corresponding author and Professor of Clinical Tropical Medicine at London School of Hygiene and Tropical Medicine in the UK, in a statement.

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The phase 3 randomized trial enrolled 15,459 young infants (aged 6 to 12 weeks at first vaccination) and children (5 to 17 months at first vaccination) from 11 sites across seven sub-Saharan African countries (Burkina Faso, Gabon, Ghana, Kenya, Malawi,Mozambique and United Republic of Tanzania) with varying levels of malaria transmission.

In 2014, initial phase III results at 18 months showed vaccine efficacy of about 46 percent against clinical malaria in children and around 27 percent among young infants.

"The European Medicines Agency (EMA) will assess the quality, safety, and efficacy of the vaccine based on these final data. If the EMA gives a favourable opinion, WHO could recommend the use of RTS,S/AS01 as early as October this year. If licensed, RTS,S/AS01 would be the first licensed human vaccine against a parasitic disease," said Mr Greenwood.