Epidemiology

PO - (8575) - EVOLUTION OF MALARIA MORBIDITY IN TWO VILLAGES IN KOROGWE, TANZANIA

Minja, Daniel (Tanzania); Lusingu, John (Tanzania); Theander, Thor (Denmark)

1 - National Institute for Medical Research; 2 - University of Copenhagen, Denmark

Background

The malaria burden has decreased significantly in recent years in the sub-Saharan Africa due to targeted interventions aimed at parasites and vectors. However, studies have shown that limited number of infective bites makes individuals in malaria endemic regions more susceptible to subsequent malaria infection as they grow older due to waning or loss of immunity amongst exposed populations. This study investigated the evolution of malaria morbidity for 14 years in Korogwe, Tanzania since 2003.

Methods

A longitudinal study was carried out in Korogwe over 14 years, from January 2003 to December 2017 whereby community health workers (CHWs) passively monitored malaria episodes at a village health post. They evaluated febrile episodes and collected blood smears from all residents of the community who presented with fever. The blood smears were processed and read at the Korogwe field station by two independent microscopists. Artemisinin Combination Therapy and malaria Rapid Diagnostic Tests were introduced in the community in 2007. Uncomplicated malaria cases were treated with Sulphadoxine-Pyrimethamine (SP) from 2003 to 2006, then with Artemether-Lumefantrine (ALu) from 2007.

Results

A total of 20,841 attendances were documented by CHWs between 2003 and 2017. Malaria parasitaemia was documented in 5,043 consultations [24.1% (95% confidence interval (CI): 23.6% to 24.8%)]. Interestingly, malaria episodes declined markedly from 38.12% to 10.42% between 2003 and 2017. The highest reduction was documented in 2010 (at 3.1%) but thereafter, there was an increase in malaria in 2015 to 32.2% which decreased to 10.42% in 2017. Use of Long Lasting Insecticide treated Nets (LLNs) was associated with reduction of malaria episodes by 34% (95% CI: 26% to 42%).

Conclusion

Prompt diagnosis at village level, use of ACT and LLINs have contributed to the reduced malaria episodes in Korogwe. However, the malaria resurgences raised concerns about malaria elimination in these communities.