Transmission palustre dans la Zone de santé Bolenge, Province de l'Equateur en RD Congo

Malaria transmission in Bolenge Health Zone, equatorial setting, DR Congo

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Summary

Context and objective. Malaria constitutes a public health major problem in Democratic Republic of Congo (DRC). For malaria control, one of adopted approach is Insecticide treated Net (ITN). In order to investigate the malaria transmission, level in an area, different parameters are therefore used. One of them is the parasitic parameter which encompass plasmodic index (PI), gametocytic index (GI), parasitemia density (PD) and the plasmodial species. Another parameter is the sporozoitic index (SI). This study aimed to assess the level of transmission in a stable Heath Zone where ITN have been partially distributed.

Methods. In cross sectional study, 185 subjects among 1066 households existing were examined from October, 11th to November 17th, 2011 in Bolenge Heath Zone including 3 Health Areas (Bolenge, Wendji Secli and Bongonde) separated between themselves by the distance of at least 10 kilometers. Thick blood smear and thin blood smear have been done in all members selected. Anopheles were captured in household for determining SI.

Results. The global PI in Bolenge Health zone was of 41.8%. The rate of mosquisto bednet utilization was 95%, 13% and 23%, respectively in Bolenge health area, Bongonde and wendji-Secli and in the same way, the PI was of 32.7%, 50.4% and 42.2%; $p < 0.01$.

The global average parasitemia of 3 Heath areas was of 2213±354 trophozoites/ µl (2326.±54; 3182±603 and 965.±194 respectively in Bolenge, Bongonde and Wendji-Secli health areas and in the same way, GI was of 3.7%, 10.4% and 4.4% SI was respectively 5, 7 et 10 in Bolenge, Wendji secli and Bongonde andP lasmodium falciparum was found at 99.9%. All anopheles were An.gambiae s.s M molecular form.

Conclusion. Malaria transmission was high in Bolenge Health Zone and in Bongonde Health Area, where the rate of the ITN use was paradoxically low.

Keywords: anopheles, parasitemia, malaria transmission, Bolenge, health zone, DR Congo