efforts to prevent breeding in plants is suggested for prevention of dengue in the district.

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24.009

Effect of Repeated Application of Biological Larvicides on Malaria Transmission in Central Côte D'ivoire

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Introduction: There is growing political and financial commitment to eradicate malaria, and hence integrated control approaches, including biological larviciding, deserve attention. The purpose of this study was to investigate whether repeated application of *Bacillus thuringiensis* (Bti) and *B. sphaericus* (Bs) have an effect on malaria transmission.

Material and methods: Larvae collection surveys conducted during 9 months showed the effectiveness of Bti and Bs. After the 8th treatment, Anopheles larvae were absent from the breeding sites. Culex larvae decreased after the 3rd treatment. Adult mosquitoes were captured by 56 man-nights in 2006 (February, May, August, and November), inside and outside households during two consecutive days.

Results: From a total of 2361 mosquitoes captured, 59.5% belonged to Anopheles genus. *An. funestus s.l.* was the most abundant, accounting for 82% of total Anophelines caught, followed by *An. gambiae* s.l. (17.2%). Peak abundance was observed during the rainy seasons, while, lowest biting rates were observed during the dry seasons. The comparison of entomological transmission parameters recorded, with data from 2005, showed that larvicide treatments permitted a significant decrease of *An. funestus* (5.1 bites/person/night; $P < 0.001$) and *An. gambiae* (18.7 bites/person/night; $P < 0.001$) biting rates. The infestation rate was stable for both species, with a much higher rate observed for An. gambiae (15.1%) when compared to *An. funestus* (2.1%). The annual entomological inoculation rate (EIR) for *An. gambiae* (281 infective bites/person/night; $P = 0.088$) was similar in 2005 and 2006, while the annual EIR of An. funestus (142 infectives bites/person/night; $P = 0.005$) has been drastically reduced.

Discussion and conclusion: The routine application of larvicides in mosquitoes breading sites decreased the number of breeding sites containing Anopheles and Culex larvae, which could have favoured the significant reduction of *An. funestus* and *An. gambiae* biting rates, and a drastic decrease of *An. funestus* EIR.

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HIV/AIDS: Treatment Including Side Effects (Poster Presentation)

25.001

Steady-state Pharmacokinetic Comparison of Generic and Branded Formulations of Lamivudine, Stavudine, and Nevirapine in HIV-infected Ugandan Adults

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Background: Triomune is standard of care for HIV in Uganda. We aimed to determine the steady-state PK, bioequivalence and tolerability of generic and branded formulations of 3TC, d4T, and NVP in HIV-infected Ugandans.

Methods: This randomized, open label, cross-over study included HIV-patients on Triomune 40® (3TC 150 mg, d4T 40 mg, NVP 200 mg) for at least 1 month. On day 1, patients were randomized to generic or branded formulation. After at least 28 days, 3TC, d4T and NVP plasma PK was assessed over 12 h. The day after, the alternate formulation was administered and 28 days later drug PK was re-assessed. Plasma PK was determined by a fully validated method using HPLC-UV detection. Bioequivalence was achieved if the 90% confidence intervals (CI) for the geometric mean ratio (GMR) of generic/branded for maximum plasma concentration (Cmax) and the area under the concentration-time curve (AUC) was within 0.8—1.25 (US Food and Drug Administration bioequivalence criteria). Questionnaires were administered to assess the tolerability of the 2 formulations.

Results: 16 (10 females) patients completed the study. Median (IQR) age, weight, CD4 count were 37y (33.7—40), 65 kg (63.4—66), 292c/ul (220.7—344.5). All were on daily cotrimoxazole. The GMR (90%CI) for 3TC, d4T, and NVP were 1.11 (0.95—1.30),0.92 (0.78—1.08), and 0.84 (0.64—1.11) for Cmax; and 1.06 (0.94—1.20),0.83 (0.70—0.97), and 0.88 (0.71—1.10) for AUC. d4T plasma concentrations were significantly lower for the generic formulation (18% decrease). 3TC, d4T, and NVP PK parameter interindividual variability ranged from 28% to 99%. There were no differences in tolerability for the 2 formulations.

Conclusions: Although the strict definition of bioequivalence was not met, drug exposures were similar for the 2 formulations, with the exception of d4T. However, the clinical significance of this remains unclear.

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