

Conclusion: A considerable number of MPX cases (23.1%) had “conjunctivitis” as a symptom of their illness. The majority of these were young children (<10 yrs.) who also had a higher frequency of other symptoms. These individuals were also more likely to be “bed-ridden”. MPX cases with “conjunctivitis” are at risk for corneal scarring, which can cause blindness. Understanding the underlying cause of “conjunctivitis” in monkeypox patients will be important, as some may be amenable to treatment (e.g., Trifluorodine has been used to treat Orthopoxvirus-associated corneal lesions). Improving the availability of ophthalmologic resources in areas endemic for monkeypox may diminish risks for significant visual sequelae among patients.

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Antiplasmodial activity and acute toxicity of fractions from cameroonian plant *Polyalthia suaveolens*



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Background: According to the WHO, malaria remains a major health problem emphasized by the reduction of *P. falciparum* susceptibility to Artemisinin and derivatives and an increasing resistance of vectors to insecticides highlighting the urgent need for new antimalarial leads. This work aimed to discover new antiplasmodial extract from Cameroonian flora.

Methods & Materials: Crude extract of *P. suaveolens* (leaves, stem bark, twigs, stem and trunk) obtained by maceration in ethanol 95% were subsequently partition between CH₂Cl₂/H₂O and MeOH 90%/Hexane to afford methanolic fractions (acetogenin-rich fractions). The Flow cytometry – based assay was used to determine the IC₅₀ of extract against chloroquine resistant strain of *P. falciparum* (W2). A phytochemical screening was performed to determine the group of bioactive secondary metabolites. The safety of fractions with good activity were assayed on healthy Swiss albino mice by oral administration at up to 5000 mg/kg.

Results: Among twenty extracts from *P. suaveolens* prepared, six exhibited a very good activity with IC₅₀ < 5 µg/mL ranged from 3.212 to 4.530 µg/mL. Four acetogenin-rich fractions of twigs, stem-bark, stems and trunk showed a very good activity. The ethanolic extract of twigs showed inhibition with a IC₅₀ of 5,754 µg/mL. Promising fractions (methanol fractions) of *P. suaveolens* were safe orally with no death or toxicity signs.

Conclusion: This result support the traditional use of *P. suaveolens* to treat malaria and relative symptoms. Meanwhile, further investigations are required toward the development of new antimalariadrug using acetogenin-rich fractions of *P. suaveolens* as starting material.

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School performance after intermittent preventive treatment using artemisinin-based combination



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Background: Previous studies showed that in areas of seasonal malaria transmission, intermittent preventive treatment of school children (IPTsc) targeting the transmission season, reduced the rates of clinical malaria. The efficacy of ACTs in the context of longitudinal IPTsc is poorly investigated and school performance has not been thoroughly evaluated.

Methods & Materials: This was an open randomized controlled trial of seasonal IPT among school children aged 6–13 years in Kollo, Mali. The study began in September 2007 and completed follow-up in June 2013. Students were randomized to one of three study arms: Sulphadoxine-pyrimethamine plus artesunate (SP/AS), Amodiaquine plus artesunate (AQ/AS) or Control (C). All students received two full treatment doses, given 2 months apart during the season of high transmission from September to December. Groups were compared with respect to school performance, incidence of clinical malaria, asymptomatic parasitemia and anaemia.

Results: A total of 296 students were randomized, and retention in the study was 99.3%. Yearly grade average and success rate in the SP/AS and AQ/AS arms were (5.37; 79.1%) and (4.87; 70.5%) respectively vs. control (4.81; 68.7%) ($P < 0.05$). Clinical malaria incidence in the SP/AS and AQ/AS arms was reduced by 50.9% and 20.6%, respectively, vs. control ($P < 0.001$). There were fewer all-cause clinic visits among the children receiving SP/AS or AQ/AS ($P < 0.001$). The prevalence of asymptomatic parasitemia was higher in the control group than in the SP/AS or AQ/AS ($P < 0.001$) groups. At the end of the transmission period, children treated with IPT showed a trend towards lower rates of anaemia (SP/AS, 4.2%; AQ/AS, 7.8%; Control, 12.7%; $P = 0.012$).

Conclusion: IPTsc with SP/AS reduced the rates of clinical malaria, all-cause acute clinic visits and asymptomatic parasitemia and trended towards a reduction in anaemia among school-aged children while improving markers of school performance.

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