

Dihydroartemisinin-piperaquine as intermittent preventive treatment for children in refugee camp

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Background

Northern Uganda hosts a large population of refugees from South Sudan, and malaria is one of the major health problems in the area. In 2015, intermittent preventive treatment for malaria (IPTc) was implemented in two refugee camps among children aged six months to 14 years.

Methods

Three distributions of dihydroartemisinin-piperaquine (DP) were conducted at eight-week intervals. The first dose was directly administered at IPTc distribution sites and the second and third doses were given to caregivers to administer at home. A multi-faceted evaluation was implemented, including coverage surveys, malaria prevalence surveys, reinforced surveillance, and pharmacovigilance.

Results

Programme coverage exceeded 90% during all three distributions with a total of 40 611 participants. Compared to same period during the previous year (only available data), the incidence of malaria in the target populations was reduced (IRR 0.73, 95% CI 0.69-0.77 among children under five years old; IRR 0.70, 95% CI 0.67-0.72 among children aged five-14 years). Among those not targeted for intervention, the incidence between the two years increased (IRR

1.49, 95% CI 1.42-1.56). During the intervention, estimates of the prevalence of parasitemia (by microscopy or PCR) ranged between 12.9-16.4%, with the highest prevalence among children aged five-14 years. This increased to 25.3% (95% CI 22.1-28.8) eight weeks after the final distribution. A total of 57 adverse events were reported during the intervention period, including 1 severe adverse event (death from varicella). Adverse events were of mild to moderate severity, and were mainly dermatologic and gastrointestinal.

Conclusion

This is the first documentation of an IPTc programme in a refugee camp. The positive impact of DP on the incidence of malaria, together with its favourable safety profile, should lead to further use of IPTc in similar settings. Expanding coverage groups and decreasing intervals between distributions might provide more benefit, but would need to be balanced with the operational implications of a broader, more frequent distribution schedule.

Preventing malaria in vulnerable populations is a major challenge. The use of DHA-Piperaquine was an effective and safe strategy for intermittent preventive treatment in Uganda