Primaquine Efficiacy and Safety for Vivax Malaria: Afghanistan

WWARN Vivax Primaquine Study Group. For further information go to https://www.iddo.org/wwarn/vivax-reports

05 May, 2025

Introduction

This report is a condensed version of the full report assessing the effect of primaquine dose on efficacy, safety and tolerability. This report provides an overview of the results only. For more detail please refer to the standard report.

Table 1: Studies included in this report

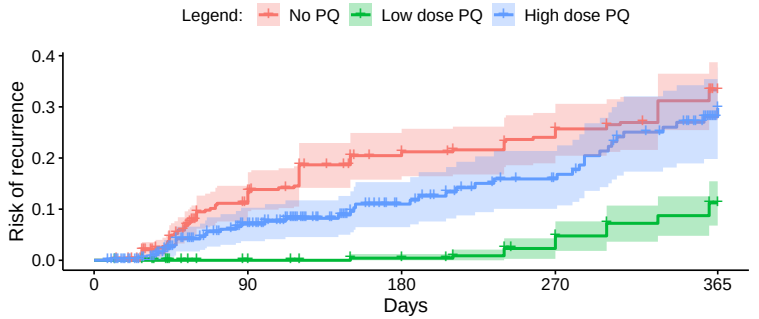
Author-year	Follow up (days)	Treatment arms	PQ treatment arm details	Patients available
Taylor-2019	365	No PQ, PQ 7 mg/kg	Cq_Pq_7.0_14d_D0, Cq_Pq_7.0_7d_D0	426
Awab-2017	390	No PQ, PQ 3.5 mg/kg	Cq_Pq_3.5_14d_D0	544

∗ *ACT – artemisinin-based combination treatment; As – artesunate; AL – artemether-lumefantrine; Aq – amodiaquine; Cq – chloroquine; DP – dihydroartemisinin-piperaquine; GI – gastrointestinal; Mf – mefloquine; PQ/Pq – primaquine; SP – sulfadoxine-pyrimethamine;*

Primaquine treatment code describes (schizontocidal drug)(hypnozoitocidal drug)(total primaquine dose)(duration of primaquine treatment eg 14d = 14 days)(primaquine start day)

Efficacy

Inclusion in the efficacy analysis was restricted to studies with 42 days or more follow up and patients with data on day 0 parasitaemia. In this report, the efficacy analysis includes 970 patients across 3 study sites, from 2 studies.



Number at risk umber of recurrence					
No PQ	347 (0)	264 (42)	213 (22)	184 (11)	149 (18)
Low dose PQ	289 (0)	258 (0)	225 (1)	199 (9)	175 (13)
High dose PQ	310 (0)	176 (17)	115 (6)	93 (6)	41 (14)

Figure 1: Kaplan-Meier figure of cumulative risk of recurrence between day 7 and day 365 for primaquine treatment category. Please interpret the results of this figure with caution as there may not always be paired treatment comparisons in the original studies contributing to these pooled results.

Low dose PQ - total primaquine 2 - <5 mg/kg;
High dose PQ - total primaquine ≥ 5 mg/kg

Haematology

The haematology analysis included 965 patients across 3 study sites, from 2 studies. The following analysis only considers the 964 patients across 2 studies with G6PD activity $\geq$ 30%.

Table 2: Summary of haematology outcomes, stratified by daily primaquine dose

	Primaquine daily dose level				
	Nil	**Low**	**Intermediate**	**High**	**Total**
	(N=348)	**(N=255)**	**(N=182)**	**(N=179)**	**(N=964)**
Drop in Haemoglobin of >25% AND Hb below 7 g/dL:					
No	339 (97.4%)	252 (98.8%)	175 (96.2%)	168 (93.9%)	934 (96.9%)
Yes	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Missing	9 (2.6%)	3 (1.2%)	7 (3.8%)	11 (6.1%)	30 (3.1%)
Drop in Haemoglobin of >5 g/dL from baseline OR Hb below 5 g/dL:					
No	338 (97.1%)	252 (98.8%)	175 (96.2%)	168 (93.9%)	933 (96.8%)
Yes	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.1%)
Missing	9 (2.6%)	3 (1.2%)	7 (3.8%)	11 (6.1%)	30 (3.1%)

The following figure provides the estimated change in haemoglobin (Hb) from day 0, for different Primiquine doses at day 2/3, adjusted for baseline haemoglobin, age, sex and day 0 parasitaemia and allowing for clustering by study site.

Care should be taken when interpreting these results, as model assumptions have not been fully assessed in this automated report format.

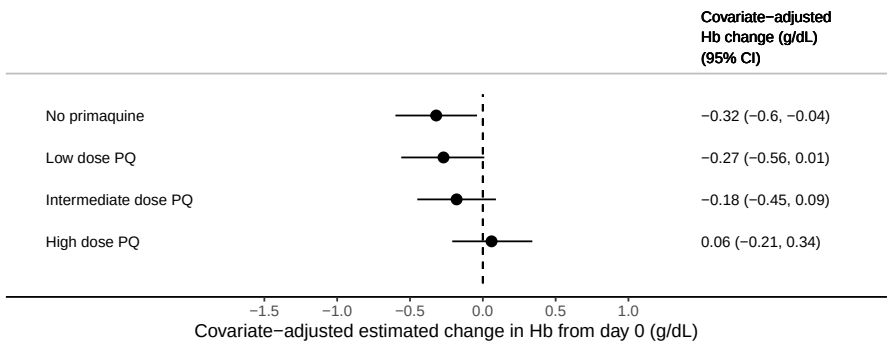


Figure 2: The covariate-adjusted estimated change in Hb from baseline to days 2-3, between primaquine daily dose groups, in patients with G6PD activity ≥30%.

Low dose daily primaquine (<0.375 mg/kg/day)
Intermediate dose daily primaquine (≥0.375 & <0.75 mg/kg/day)
High dose daily primaquine (≥0.75 mg/kg/day).