

S3 Table: Comparing Odds ratio differences for specific severe malaria syndromes between single dose and double dose non-*O* genotypes using the Wald test

Case Phenotype	ABO genotype	No Cases/Controls	Odds Ratio comparisons	Wald test <i>p</i> value
<i>All CM</i>	<i>AO vs AA</i>	166/810; 22/83	1.29/1.60	0.422
	<i>BO vs BB</i>	160/683; 16/55	1.45/1.90	0.396
	<i>AO vs AB</i>	166/810; 26/115	1.29/1.47	0.595
	<i>BO vs AB</i>	160/683; 26/115	1.45/1.47	0.951
<i>All SMA</i>	<i>AO vs AA</i>	97/810; 9/83	1.35/1.18	0.736
	<i>BO vs BB</i>	99/683; 10/55	1.62/1.71	0.896
	<i>AO vs AB</i>	97/810; 19/115	1.35/2.05	0.137
	<i>BO vs AB</i>	99/683; 19/115	1.62/2.05	0.394
<i>All RD</i>	<i>AO vs AA</i>	101/810; 13/83	1.41/1.68	0.598
	<i>BO vs BB</i>	99/683; 20/55	1.63/2.01	0.586
	<i>AO vs AB</i>	160/810; 12/115	1.41/1.25	0.715
	<i>BO vs AB</i>	99/683; 12/115	1.63/1.25	0.414
<i>Mortality</i>	<i>AO vs AA</i>	33/810; 2/83	1.74/1.00	0.456
	<i>BO vs BB</i>	23/683; 2/55	1.35/1.66	0.785
	<i>AO vs AB</i>	33/810; 4/115	1.74/1.50	0.785
	<i>BO vs AB</i>	23/683; 4/115	1.35/1.50	0.849

The Wald test was used to compare odds ratio differences between single dose and double dose non-*O* genotypes to test the hypothesis that double dose non-*O* genotypes (*AA*, *AB*, *BB*) are associated with a higher risk of severe malaria than single dose non-*O* genotypes (*AO*, *BO*). Odds ratios for severe malaria and specific severe malaria syndromes cerebral malaria (CM), severe malarial anaemia (SMA) and respiratory distress (RD), and malaria-specific mortality were determined following a fixed-effects logistic regression model comparing genotype frequencies between the non-*O* genotypes (*AO*, *AA*, *AB*, *BO*, *BB*) to the reference *OO* genotype with adjustments for self-reported ethnicity, gender, α^+ thalassaemia and HbAS. SM: Severe malaria; OR: Odds Ratio; LCI: Lower Confidence Interval (95%); UCI: Upper Confidence Interval. †Adjusted for HbS, α^+ thalassaemia, gender, ethnicity and interaction (HbS and α^+ thalassaemia).