

Decreased Susceptibility to *Plasmodium falciparum* Infection in Pregnant Women with Iron Deficiency

Edward R. Kabyemela, Michal Fried, Jonathan D. Kurtis, Theonest K. Mutabingwa, Patrick E. Duffy

The Journal of Infectious Diseases, Volume 198, Issue 2, 15 July 2008,
Pages 163–166, <https://doi.org/10.1086/589512>

Published: 15 July 2008

Abstract

Iron plus folate supplementation increases mortality and morbidity among children in areas of malaria endemicity in Africa, but the effects of supplementation on pregnant women in malaria-endemic areas remain unclear. In northeastern Tanzania, where malaria and iron deficiency are common, we found that placental malaria was less prevalent (8.5% vs. 47.3% of women; $P < .0001$) and less severe (median parasite density, 4.2% vs. 6.3% of placental red blood cells; $P = .04$) among women with iron deficiency than among women with sufficient iron stores, especially during the first pregnancy. Multivariate analysis revealed that iron deficiency ($P < .0001$) and multigravidity ($P = .002$) significantly decreased the risk of placental malaria. Interventional trials of iron and folate supplementation during pregnancy in malaria-endemic regions in Africa are urgently needed to ascertain the benefits and risks of this intervention.