

Rectal Artesunates, Their Utilization, and Parental Perception in the Management of Malaria in Children from Abeokuta, Southwestern Nigeria

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Abstract

Utilization, efficacy, perception, and acceptability of rectal artesunates for treatment of malaria were assessed in 264 children below 5 years attending two tertiary health facilities in Abeokuta, Nigeria. The children systematically selected were 136 from State Hospital Ijaye and 128 from Federal Medical Centre (FMC), Idi-Aba. Body weights and vital statistics of the children were measured; and blood samples were collected before and 24h after administration of the rectal artesunates (Plasmodium-50/200 mg Artesunate) to evaluate the efficacy of the suppository. The first dose of rectal artesunate suppository was administered at a dose of 5-10 mg/kg of body weight per rectum. Giemsa thin and thick films were employed to determine parasite species, malaria parasite count/ILL (MPC/ILL), and percentage of parasitized red blood cells (PPRBCs). Data were analyzed using SPSS version 16.0. *Plasmodium falciparum* was the malaria parasite identified by blood examination, with a pretreatment prevalence of 98.9%. Male children had higher infection rate (55%) than females (45%), and infection among age groups and weight groups varied. Chi-square analysis revealed a significant difference between weight and malaria parasite count ($p < 0.05$). Post-treatment analysis after 24 h showed that prevalence dropped by 73%, with females having higher crash rate (77%) than males (69%) but with no statistical difference ($p > 0.05$) among the sexes. Chi-square analysis of pre- and post-treatment revealed a significant difference between MPC/ILL and PPRBC at $p < 0.05$. This confirmed the efficacy of rectal artesunate in reducing the parasite density (parasitaemia) within 24h of treatment. On acceptability, 99.60% of parents accepted to use the suppository. However, 87.1% of parents preferred its usage, as it is easy to administer with no adverse effects when administered on their children. If health officials increase more public knowledge on the use of rectal artesunates, the high mortality now experienced in children under 5 years due to malaria disease would be greatly reduced.

Key Words: Abeokuta—Acceptability—Malaria—Nigeria—Perception—Rectal artesunates—Utilization.