Efficacy of Chloroquine Chemoprophylaxis for Plasmodium falciparum in Dindori District, Madhya Pradesh

Dear Editor,

Life threatening complication of Plasmodium falciparum malaria among those who visit forest villages of Madhya Pradesh (MP) are on the increase. In the earlier communication we reported case study of highly specialized professionals who visited forest villages of MP and had severe Plasmodium falciparum infection which caused high morbidity and mortality. These professionals did not take chemoprophylaxis or antimosquito measures. Here we are reporting about the case study of a young researcher (CSIR, JRF) who took all precautions before entering forest of Dindori, yet suffered from falciparum malaria.

PKB visited Baigachak of Dindori from 17th to 24th August initially for studying therapeutic efficacy against Plasmodium falciparum. Afterwards he went there every week from 28th August till 17th September 2004 for two to three days according to revised WHO protocol.

He was on chemoprophylaxis during this period taking 300 mg chloroquine (CQ) weekly. After every visit he was getting his blood smear done and testing his blood by rapid diagnostic test (ParaHIT f, Span diagnostic, Surat). He was also taking all possible preventive measures i.e, using mosquito net and mosquito coil. He returned on September 17th after staying in Baigachek for two days. On 28th September 2004 at about 7 pm he developed severe headache and dizziness. ParaHIT f rapid diagnostic test and blood smear were both negative for malaria parasite. On 29th September he developed fever, with severe body ache, dizziness and nausea. The physician (ACN) suspected malaria and advised anti-malarials. However, PKB, confident of his preventive measures and chemoprophylaxis, ignored medical advise and took paracetamol and roxithromycin 150 mg. In the evening he became very restless, developed hyperpyrexia (103°C) with chills, rigor and convulsions and frequent vomiting. He was hospitalized by 8 pm and tested again for malaria. ParaHIT f was positive and blood smear showed Plasmodium falciparum, with very low parasitaemia i.e, 120 parasites/µL. He was administered E-mail (150 mg) intramuscularly. Though he became aparasitaemic on 30th September he continued to have hyperpyrexia (104°C) with frequent vomiting till 1st October. He recovered and was discharged on 3rd October 2004.

Persistent malaria transmission is the characteristic feature in most forested area. According to an estimate 0.67 million population of Dindori which constituted only one percent population of MP, contributed highest number of malaria cases (12%) in the state. There are two potential vector species i.e, Anopheles culicifacies and Anopheles fluviatilis. The district is under synthetic pyrethroid spray since 2000. However, in 2004, it was not sprayed because of administrative reasons which resulted in intense high transmission almost like an epidemic (unpublished report DMO, Dindori). In fact, resistance to chloroquine is increasing and it is estimated that between 15-30% of the ethnic communities in the region are showing chloroquine resistance to varying level (unpublished data). Clearly, there is an urgent need to change treatment policy in this part of central India. Effective alternative drugs exist and can be used in a way that minimizes the selection pressure for drug resistance thus delaying the emergence of resistance.

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References


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