

Abstract:

Abstract Background Pentoxifylline (PTX) affects many processes that may contribute to the pathogenesis of severe malaria and it has been shown to reduce the duration of coma in children with cerebral malaria. This pilot study was performed to assess pharmacokinetics, safety and efficacy of PTX in African children with cerebral malaria. **Methods** Ten children admitted to the high dependency unit of the Kilifi District Hospital in Kenya with cerebral malaria (Blantyre coma score of 2 or less) received quinine plus a continuous infusion of 10 mg/kg/24 hours PTX for 72 hours. Five children were recruited as controls and received normal saline instead of PTX. Plasma samples were taken for PTX and tumour necrosis factor (TNF) levels. Blantyre Coma Score, parasitemia, hematology and vital signs were assessed 4 hourly. **Results** One child (20%) in the control group died, compared to four children (40%) in the PTX group. This difference was not significant ($p = 0.60$). Laboratory parameters and clinical data were comparable between groups. TNF levels were lower in children receiving PTX. **Conclusions** The small sample size does not permit definitive conclusions, but the mortality rate was unexpectedly high in the PTX group.