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Featured Abstract

Neurocognitive Impairment and Epilepsy in School-Aged Children After Severe Malaria in a Malaria Endemic Area

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ABSTRACT

Introduction. Severe malaria is a contributor to Neurocognitive impairment and epilepsy in children living in Sub-Saharan Africa but there is no published data on this subject in Cameroon.

Objectives. We sought to understand the possible neurological long term effects of severe malaria in school-aged children living in Yaoundé, Cameroon.

Methods. In this retrospective cohort study of 50 eligible children who survived severe malaria in Yaoundé, demographic, clinical, neuropsychological and electroencephalographic evaluations were done using standard clinical procedures.

Results. The mean age was 9.38±3.06 years. The prevalence of neurocognitive impairment and epilepsy were 38% and 20% respectively. The risk of developing epilepsy evaluated by EEG epileptic activity was 34.4%. The incidence of neurocognitive impairment was 226 cases per 1000 person years. The incidence of epilepsy and epileptic activity on the electroencephalogram were 140 and 154 cases per 1000 person years respectively. The most affected cognitive domains were: fine motor skills, sustained attention, mental flexibility and verbal memory. There was no association between coma and neurocognitive impairment (p=0.54) but there was an association between high daily seizure frequency during malaria and subsequent epilepsy (p=0.013 respectively) and between disease duration and epileptic activity (p=0.043).

Conclusion. The prevalence and incidence rates of neurocognitive impairment and epileptic activity are significantly high in children who suffered from severe malaria in Yaoundé. High seizure frequency is a predictor of epilepsy while coma is not a predictor of neurocognitive impairment in these children.