Seizure remission rates and adverse drug reaction profile in Nigerian children with West Syndrome treated with high dose prednisolone

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INTRODUCTION

West syndrome (WS) is a catastrophic epileptic encephalopathy. Treatment in resource-limited settings could be quite challenging due to the high cost and limited availability of adrenocorticotropic hormone. Prednisolone has been found to be a viable alternative.

OOBJECTIVES

To determine seizure remission rates and adverse drug reactions (ADRs) to high-dose prednisolone in a cohort of Nigerian children with WS.

MATERIALS

Infants diagnosed with WS over a period of 20 months were admitted and placed on a 40mg daily dose of prednisolone, with an increase to 60mg if indicated.

Diagnosis was based on clinical history, caregivers' video recordings of events and hypsarrhythmias on electroencephalography (EEG).

All children were prospectively followed up with daily weighing, daily urinalysis, 6 hourly blood pressure (BP) monitoring, 4 hourly blood sugar measurementsand seizure diary till discharge and at the paediatric neurology clinic post-discharge.

Outcome variables of interest were seizure remission, normalisation of EEG and ADRs to prednisolone.

RESULTS

22 children were enrolled - 14 males and 8 females. Mean age at seizure onset and diagnosis were 4.84 (2.0) and 11.9 (5.4) months respectively.

The leading causes of WS were severe perinatal asphyxia (45.5%) and congenital brain malformations (22.7%).

Seventeen (72.3%) attained total seizure freedom and 2 (9.09%) had significant reduction in seizure frequency.

Eight (47.0%) of the 17 children with complete seizure freedom required an increase in dose of prednisolone to attain remission. Longest seizure-free period at time of discharge ranged from 6 to 17 days.

The commonest adverse reactions observed were irritability and infections.

CONCLUSIONS

High-dose prednisolone represents a cheap and cost-effective treatment for WS in resource-limited settings. It is relatively well tolerated, with high rate of seizure remission accompanied by resolution of hypsarrhythmias.

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