Utilization of Paediatric Electroencephalogram at Komfo Anokye Teaching Hospital

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Background

Though the diagnosis of epilepsy remains clinical, the electroencephalogram (EEG) is important in further evaluation of the patient, providing details on seizure type(s) and sometimes confirming an epilepsy syndrome. In Ghana, until 2016, EEG service was only available in the capital, Accra, and not accessible to many patients with epilepsy. Following the introduction of paediatric EEG service at the Komfo Anokye Teaching Hospital (KATH) in 2016, many children with epilepsy are referred from various parts of the country for further evaluation. There is no data on where these children are referred from, who is referring them, and how long it takes to get the EEG done and receive a report.

We aimed to determine the demography and patterns of referral of children seeking EEG service at KATH.

Methods

A retrospective review of EEG referral letters and EEG reports of patients who had EEG recordings at the Paediatric EEG laboratory from January to December 2020 was done to determine the age, sex, referring facility, region, waiting times, and the abnormalities reported. For patients referred from outside KATH, the distance from the referring centers to KATH was estimated using Google Maps.

Results

Two hundred and fifty-six patients (108 females and 148 males, aged 1 month to 41 years) had EEGs done in the lab in 2020. These were referred from 10 out of the 16 regions, with Ashanti contributing the majority (74%). Most of the referrals were from medical officers (49.2%) and pediatricians (including neurologists) (33.2%). For referrals not coming from KATH, the mean distance from the referring centers to KATH was 55.1km (IQR 5.3 - 107.0km). After requesting an EEG, it took a median duration of 4 days (IQR 1 - 9) to get the recording done, and a further median duration of 20 days (IQR 8 - 34) to receive a report. Fifty-seven percent of the EEGs were reported as abnormal.

Conclusion

EEG utilization is common among medical officers and paediatricians caring for children with epilepsy who are referred from various parts of the country. In resource-limited settings, clinicians need to consider several factors before requesting an EEG to minimize abuse.