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ORIGINAL PAPER

Evolving clinical utility of long-term electroencephalography in pediatric epilepsy: diagnostic and therapeutic trends between 2019 and 2024

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ABSTRACT

Introduction: Epilepsy is a chronic neurological disorder marked by recurrent, unprovoked seizures. Electroencephalography (EEG) is crucial for diagnosing and managing epilepsy. Recently, the use of long-term EEG has expanded beyond clear epilepsy suspicion, raising concerns about overinterpretation and diagnostic overuse. This study analyzes long-term EEGs in pediatric patients, assessing whether broader application reflects genuine clinical need or excessive use.

Material and methods: A retrospective analysis was conducted and included 59 long-term video EEG recordings from 54 children (mean age 7.78 years) in 2019, and 96 EEGs from 94 children (mean age 8.92 years) in 2024. All patients were hospitalized for evaluation of confirmed or suspected epilepsy. Daytime and combined day-and-night recordings were analyzed by certified pediatric neurophysiologists. Patients were grouped based on diagnosis status, EEG findings, and correlation with clinical symptoms.

Results: In 2019, the majority of patients had previously confirmed epilepsy, with antiepileptic treatment changes made in 44% of cases based on EEG findings. In 2024, there was a noticeable increase in referrals for suspected epilepsy, particularly among children with developmental concerns. Electroencephalography-seizure correlation was significantly higher in 2019 (65%) compared to 2024 (31%). Eye deviation during seizures consistently matched EEG findings across both years, serving as a clinical clue.

Conclusions: The use of long-term EEG monitoring increased between 2019 and 2024, with a shift toward evaluating diagnostically complex and behaviorally diverse cases. Long-term monitoring continues to improve diagnostic accuracy and inform treatment decisions, but the lower EEG-seizure correlation observed in 2024 indicates that broader indications may reduce diagnostic yield. Eye deviation remained a reliable electroclinical marker of seizures. Long-term EEG remains a valuable tool for distinguishing epileptic from non-epileptic events; its use should be guided by careful patient selection to avoid overinterpretation, unnecessary testing, and misdiagnosis, particularly in children with developmental and behavioral disorders.

KEY WORDS:
pediatric epilepsy, long-term EEG monitoring, neurodevelopmental disorders, seizure diagnosis.

INTRODUCTION

Epilepsy is a chronic neurological condition characterized by recurrent, excessive, and often unpredictable neuronal discharges in the brain resulting from various underlying disturbances within the central nervous system [1]. Due to the diverse etiology and complex clinical manifestations of epilepsy, its diagnosis and classification require a multifaceted approach. Electroencephalography (EEG) remains a cornerstone in the assessment of pa-

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tients suspected of having seizures. It is widely regarded as an efficient, non-invasive, and cost-effective diagnostic tool used to support the diagnosis, classify seizure types, identify the location of seizure onset, and monitor disease progression or treatment efficacy [2]. Routine EEG (rEEG) plays a critical role in both the diagnosis and management of epilepsy [3, 4]. Given the limitations of rEEG, longer-term EEG modalities have been increasingly adopted in clinical settings. Long-term EEG recordings have been shown to offer superior sensitivity for both ictal and interictal abnormalities, even when compared to multiple rEEG sessions [5–7]. These methods are particularly valuable in patients whose seizures are infrequent or who present with unclear or atypical seizure semiology. The increasing reliance on long-term EEG monitoring raises important questions about its appropriate clinical use, especially in patients without a strong suspicion of epilepsy. The expanding indications for long-term EEG, including behavioral disturbances, sleep disorders, and developmental delays, may lead to overutilization and diagnostic overinterpretation. In such populations, nonspecific EEG abnormalities are common and can be mistaken for epileptiform activity, potentially resulting in misdiagnosis, unnecessary treatment, and psychosocial consequences. This risk highlights the need for critical evaluation of referral practices and careful patient selection. Long-term EEG, while offering improved diagnostic yield, also entails greater logistical, financial, and psychological burdens compared to routine EEG, emphasizing the importance of balancing benefits against potential harms. Long-term EEG has emerged as a practical and cost-effective alternative to inpatient video-EEG monitoring, especially when evaluating paroxysmal events that raise the suspicion of epilepsy [3]. It allows for long-term monitoring improving the chances of capturing spontaneous events. Long-term EEG monitoring plays a vital role not only in detecting epileptiform discharges but also in refining the clinical understanding of seizure frequency and types. Long-term EEG has been proposed as a useful tool for accurately assessing seizure burden [8], guiding presurgical evaluation in drug-resistant cases [9, 10], and estimating the risk of seizure recurrence after withdrawal of antiepileptic drugs [11]. The incorporation of video recording into inpatient EEG studies further enhances diagnostic precision. Visual correlation between clinical manifestations and EEG findings significantly improves diagnostic yield, particularly in cases of non-epileptic events [12, 13]. Video-EEG monitoring is now widely accepted as the gold standard for diagnosing psychogenic nonepileptic seizures [14, 15]. It aids not only in confirming or ruling out epilepsy but also in the classification of epileptic syndromes, assessment of seizure severity, localization of seizure onset zones, electroclinical correlation, and pre-surgical evaluation [16]. While these tools have long been utilized in adult populations, long-term EEG and video-EEG have proven to be particularly useful in pediatric patients as well, especially those with subtle or atypical clinical presentations [17, 18]. By analyzing data from two separate years – 2019 and 2024 – we sought to assess how long-term EEG monitoring contributes to diagnostic clarification, therapeutic decision-making, and seizure characterization in a real-world hospital setting. Additionally, we aimed to examine temporal trends in long-term EEG use, assessing whether its expansion reflects genuine clinical need or overuse in uncertain cases.

MATERIAL AND METHODS

This retrospective observational study was conducted at the Department of Developmental Neurology, University Clinical Hospital in Poznan. Long-term EEG was utilized as part of the diagnostic and treatment evaluation process in pediatric patients admitted with epilepsy or paroxysmal symptoms raising suspicion of epileptic etiology. We analyzed the medical records of children hospitalized in 2019 and 2024 who underwent long-term EEG monitoring during their inpatient stay. Patients were eligible for inclusion if they were under 18 years of age at the time of examination and had complete and clinically relevant medical documentation available. No formal exclusion criteria were applied apart from incomplete or technically insufficient EEG recordings. A total of 59 long-term EEG recordings were performed in 2019 in a group of 54 patients, aged 1–18 years (mean age: 7.78 years; median: 7). In 2024, 96 long-term EEG examinations were conducted in 94 patients aged 2 to 18 years (mean age: 8.92 years; median: 8). No statistically significant difference in age distribution was found between the two cohorts (Student's t-test 0.184; $p > 0.05$). In 2019, the recordings included 14 daytime, 1 nighttime, and 44 combined day-and-night studies. In 2024, 34 were daytime recordings, and 62 were combined day-and-night recordings.

In the suspected epilepsy group, referrals were most commonly prompted by paroxysmal or behavioral symptoms raising diagnostic uncertainty. These included nocturnal anxiety and sleep disturbances, autism spectrum disorder (ASD), speech delay, Rett syndrome, headaches, tics, suspected psychogenic (conversion) disorders, and various other neurological or developmental abnormalities. These features were considered part of the clinical presentation leading to the decision to perform long-term EEG monitoring. All recordings were performed using digital long-term EEG systems, with scalp electrodes placed according to the international 10–20 system. Data were recorded using Micromed® EEG acquisition software. The recording duration ranged from one hour (daytime recordings) to up to 19 hours (day-and-night studies). EEG data were reviewed and interpreted by board-certified clinical neurophysiologists according to standard diagnostic protocols. During the monitoring, all patients were under continuous observation by caregivers and video surveillance. Parents were instructed to record the timing and characteristics

of any observed seizure-like episodes or unusual behaviors. Each reported event was subsequently reviewed in detail by a team of epileptologists and neurophysiologists, who analyzed the clinical context together with the corresponding EEG segments to determine whether the episodes met criteria for epileptic seizures. As this study involved retrospective analysis of anonymized clinical data collected during routine medical care, it did not require approval from the institutional review board or bioethics committee in accordance with applicable regulations. Statistical analysis was performed using descriptive statistics and appropriate comparative tests depending on the data type and distribution. The χ^2 test was used to compare categorical variables, including differences in diagnostic yield, seizure detection rates, and treatment decisions between 2019 and 2024 cohorts (Table 1).

TABLE 1. General characteristics of long-term electroencephalography recordings and patient cohorts

Parameters	2019 ($N = 54$)	2024 ($N = 94$)
Total long-term EEG recordings	59	96
Age range (years)	1–18	2–18
Mean age (years)	7.78	8.92
Daytime recordings, *n* (%)	14 (23.7)	34 (35.4)
Day + night recordings, *n* (%)	44 (74.6)	62 (64.6)
Patients with confirmed epilepsy, *n* (%)	43 (79.6)	43 (45.7)
Patients with suspected epilepsy, *n* (%)	16 (29.6)	53 (56.4)

EEG – electroencephalography

TABLE 2. Summary of seizure events captured during long-term electroencephalography monitoring

Clinical outcome	2019	2024
Treatment discontinued (epilepsy group), *n* (%)	2 (4.7)	5 (11.6)
Treatment modified (epilepsy group), *n* (%)	17 (39.5)	13 (30.2)
New epilepsy diagnoses (suspected group), *n* (%)	2 (12.5)	3 (5.7%)
Total seizures reported	20	26
EEG – seizure correlation, *n* (%)	13 (65)	8 (30.8)
Motor seizures with eye deviation, *n* (%)	2 (10)	1 (3.8)
Seizures in day + night recordings, *n* (%)	12 (60)	17 (65.4)
Seizures in daytime-only recordings, *n* (%)	8 (40)	9 (34.6)

EEG – electroencephalography

RESULTS

A total of 59 long-term EEG recordings were performed in 54 pediatric patients in 2019. Among them, 43 exams (79.6%) were done among the group of patients who had a confirmed diagnosis of epilepsy. In this subgroup, antiepileptic treatment was discontinued in 2 patients (4.7%) following unremarkable EEG findings and clinical reevaluation, while treatment was modified in 17 patients (39.5%) based on long-term EEG results. The remaining 16 patients (29.6%) were evaluated due to suspected epilepsy. In this group, epilepsy was newly diagnosed and treatment initiated in 2 cases (12.5%): one with nocturnal anxiety and sleep disturbances and one with unspecified neurological symptoms. The clinical characteristics of the suspected epilepsy group included: 6 patients with nocturnal anxiety and sleep disturbances, including 1 with a confirmed epilepsy diagnosis; 3 with ASD; 2 with headaches and vomiting; 1 with multiple sclerosis and morning myoclonia; 1 with motor tics; 1 with suspected psychogenic seizures; and 2 with other neurological or behavioral abnormalities, including 1 confirmed epilepsy diagnosis in this subgroup. During long-term EEG recordings in 2019, a total of 20 seizure episodes were reported. All events were characterized by motor phenomena; in 2 cases (10%) these additionally included eye deviation. Thirteen seizures (65%) showed electrographic correlation with epileptiform activity in the EEG trace. Seizures occurred during combined day-and-night recordings in 12 cases (60%) and during daytime-only recordings in 8 cases (40%). In both cases accompanied by eye deviation, it appeared to be an additional symptom correlating with EEG. Eye deviation itself was not an isolated seizure manifestation but was consistently observed as an accompanying sign during motor seizures. Not all motor events reported by caregivers were confirmed as epileptic seizures, as some lacked corresponding EEG changes. In contrast, whenever eye deviation was reported along with motor symptoms, it always coincided with epileptiform EEG activity, and these events were classified as epileptic seizures. In 2024, 96 long-term EEG recordings were obtained in 94 pediatric patients. Among them, 43 exams (45.7%) were done among the group of patients who had a pre-existing diagnosis of epilepsy. In this group, treatment was discontinued in 5 cases (11.6%) and adjusted in 13 cases (30.2%) following EEG review. The remaining WW53 patients (56.4%) were referred due to suspected epilepsy. Epilepsy was diagnosed and treatment initiated in 3 patients (5.7%) from this group: one with Rett syndrome and two with other unspecified developmental or neurological concerns. In 2024, 26 seizure events were reported. All seizures were motor in nature, and eye deviation was observed in one case (3.8%). Electroencephalography correlation was noted in 8 of the 26 events (30.8%). Seizures occurred during combined day-and-night recordings in 17 cases (65.4%) and during daytime-only recordings in 9 cases (34.6%) (Table 2).

COMPARISON BETWEEN 2019 AND 2024

When comparing data of 2019 and 2024, a notable increase was observed in the number of long-term

EEG examinations, rising from 59 studies in 54 patients to 96 studies in 94 patients. Despite the greater number of tests performed in 2024, the proportion of patients with a confirmed epilepsy diagnosis was significantly lower (79.6% in 2019 vs. 45.7% in 2024; $\chi^2 = 11.67$; $p = 0.0006$). Conversely, the proportion of patients referred for suspected epilepsy increased (29.6% in 2019 vs. 56.4% in 2024), reflecting a broader diagnostic use of long-term EEG in cases with complex or unclear clinical presentations. The impact of long-term EEG findings on therapeutic decisions was substantial in both cohorts. Among patients with confirmed epilepsy, antiepileptic treatment was discontinued in 4.7% of patients in 2019 and 11.6% in 2024, while treatment modifications occurred in 39.5% and 30.2% of cases, respectively. This difference was not statistically significant ($\chi^2 = 0.047$, $p = 0.83$) suggesting a similar influence of long-term EEG results on therapeutic decisions across both periods. Among patients referred for suspected epilepsy, new diagnoses were established in 12.5% of cases in 2019 and 5.7% in 2024, leading to treatment initiation. This difference did not reach statistical significance (Fisher's exact test, $p = 0.33$). It may be attributed to the small number of new diagnoses in both groups. A total of 20 seizure episodes were recorded in 2019 and 26 in 2024. The percentage of seizures showing electrographic correlation with EEG activity was statistically significantly higher in 2019 (65%) compared to 2024 (30.8%; $\chi^2 = 5.34$; $p = 0.021$). In both years, all seizures were motor in nature, and episodes involving eye deviation always correlated with detectable EEG changes. Of the 46 clinical seizures observed across both years, eye deviation was documented in 3 cases, all of which demonstrated clear EEG correlation. Although this pattern suggests a potential association, statistical analysis did not confirm significance (Fisher's exact test, $p = 0.0876$). The small number of such cases may have limited the statistical power despite a notable clinical trend. Seizure events were more frequently captured during combined day-and-night recordings in both years: 60% in 2019 and 65.4% in 2024. The lower rate of EEG-seizure correlation in 2024 (30.8% vs. 65% in 2019) may reflect a growing proportion of diagnostically ambiguous cases referred for evaluation.

DISCUSSION

The comparison of long-term EEG utilization in 2019–2024 revealed both quantitative growth and a qualitative shift in its clinical application. Not only did the number of examinations rise significantly, but the patient population also changed, with a marked increase in referrals due to suspected epilepsy and a lower proportion of individuals with a previously confirmed diagnosis. This trend likely reflects a growing reliance on long-term EEG as a diagnostic tool in complex or diagnostically uncertain pediatric presentations. Our findings align with previously published studies confirming the diagnostic value of long-term video-EEG monitoring in children. It has been shown that the diagnostic yield in pediatric populations can be slightly higher than in adults, ranging from 53% to 80%, with recordings typically lasting 8 hours – 1.5 days [19–23]. The observed increase in referrals without a prior diagnosis raises a critical issue: to what extent is long-term EEG being used selectively vs. reflexively? While the potential of long-term recordings is undeniable in ambiguous cases, the risk of overuse in patients with low pretest probability of epilepsy must be acknowledged. This may include children with non-specific behavioral disturbances, developmental delay, or sleep problems – populations in which EEG abnormalities, if present, are often incidental and not necessarily epileptiform. The increasing use of long-term EEG in patients without an established epilepsy diagnosis – especially those with behavioral disturbances, sleep-related symptoms, or neurodevelopmental conditions – supports the notion that long-term monitoring improves diagnostic precision in ambiguous cases. This expanding clinical application carries inherent risks. Nonspecific EEG changes in children – such as intermittent slowing or benign variants – can be mistakenly interpreted as pathological, especially outside of specialized centers or in the absence of clear clinical correlation. Overdiagnosis of epilepsy in such cases has well-documented consequences: unnecessary exposure to antiepileptic drugs, adverse effects, and social stigma [24]. It is important to stress that such scenarios are not rare edge cases but rather a systemic risk in routine pediatric neurology. It is also important to note that, despite its widespread use, the diagnostic yield of a single routine interictal EEG remains limited. Even with standard activation techniques such as hyperventilation or photic stimulation, epileptiform abnormalities are detected in only about 40% of patients with epilepsy during their first rEEG [25]. Studies have shown that this detection rate can rise significantly – up to 90% – when three to four serial EEGs are performed [26]. Still, there is considerable variability in clinical practice, and questions regarding the optimal duration and timing of EEG recordings remain unresolved [4, 27]. Without clear guidelines on when long-term EEG is genuinely indicated, there is a growing risk that the test becomes an exploratory diagnostic exercise rather than a targeted investigative tool. In this context, long-term EEG offers a valuable alternative to routine short-term studies by enabling long-term monitoring and thereby increasing the likelihood of capturing seizures or interictal abnormalities – particularly in patients with atypical or subtle clinical manifestations. Yet, it is essential to emphasize that extended monitoring comes at a cost: logistical, financial, and psychological. For families and children, long-term EEG can be burdensome – requiring prolonged immobility, cooperation, and in some settings, hospitalization. If used without a strong clinical rationale, the harms of unnecessary testing may

outweigh the benefits. A routine short-term EEG – or in some cases, no EEG at all – may be a more appropriate and safer clinical choice. In both 2019 and 2024, long-term EEG findings played an important role in guiding clinical management. In the epilepsy group, treatment was discontinued or adjusted in a significant proportion of patients, consistent with prior research showing diagnostic changes in up to 52.3–53% of cases following extended EEG monitoring [28]. Among patients referred for suspected epilepsy, new diagnoses were established in 12.5% (2019) and 5.7% (2024), which although lower, still underscores the method's clinical utility. The relatively low diagnostic confirmation rate in 2024 (5.7%) also raises the concern that many patients may have undergone long-term EEG unnecessarily. In children with a low likelihood of epileptic seizures, the probability of capturing clinically relevant events decreases, while the risk of incidental findings increases. This reinforces the necessity of developing evidence-based triage criteria to determine who truly benefits from extended recordings. This utility becomes especially relevant considering the subtle nature of seizure manifestations in children. Seizure semiology may be limited to behavioral changes that are either misinterpreted or unnoticed by caregivers [29]. In such scenarios, standard EEG recordings may fail to capture relevant data, and long-term EEG provides a broader window for identifying characteristic patterns. Moreover, detailed electroclinical evaluation can uncover interictal focal discharges or help localize seizure onset zones, thereby refining the syndromic classification and informing treatment planning [30, 31]. Despite the increased number of long-term EEG recordings in 2024, the proportion of seizures with EEG correlation was lower than in 2019 (30.8% vs. 65%). This discrepancy may be attributed to a more diagnostically challenging cohort with less overt electrographic abnormalities, as well as to the broader application of long-term EEG in behavioral and developmental disorders. Diagnostic confusion between the two is common and can lead to inappropriate use of antiepileptic drugs, unnecessary exposure to side effects, increased healthcare costs, and psychosocial burdens [32]. The key contribution of this study is demonstrating how the expansion of long-term EEG indications between 2019 and 2024 has led to a measurable decline in diagnostic yield. This finding underscores the need for stricter referral criteria and supports a more selective use of long-term monitoring, particularly in children with neurodevelopmental disorders. Additionally, the consistent association between eye deviation and electrographic seizure activity identifies a simple and clinically reliable bedside marker.

CONCLUSIONS

This study illustrates not only the growing clinical interest in long-term EEG monitoring in pediatric neurology but also the emerging need for more critical reflection on its use. Between 2019 and 2024, the number of long-term EEG examinations increased markedly, accompanied by a broader spectrum of referral indications – particularly among children with developmental delay, behavioral symptoms, and sleep-related complaints. While this trend may indicate rising awareness of epilepsy's varied presentations, it also suggests a worrisome shift toward more liberal and potentially unjustified use of long-term EEG in populations where the diagnostic yield is often limited. Although long-term EEG continued to inform therapeutic decisions in both years, the significant drop in EEG-seizure correlation in 2024 (65–30.8%) raises fundamental questions about clinical appropriateness. Rather than attributing this solely to more diagnostically complex cases, it must be acknowledged that this decline likely reflects broader overuse of the method in patient groups with low pretest probability of epilepsy. In such contexts, EEG may detect non-specific or benign findings that are easily overinterpreted, leading to diagnostic errors, unnecessary treatment, and iatrogenic harm. Eye deviation remained a robust clinical marker correlated with epileptic activity, but in many other cases, especially those involving ambiguous behavioral symptoms, the interpretation of EEG became less definitive. This points to a critical dilemma: the diagnostic power of long-term EEG depends not only on the duration of recording but on the strength of clinical indication. Without clearly defined, evidence-based criteria for referral, the risk of incidental findings – and their misinterpretation – will inevitably increase. Our data show a significant rise in the number of children referred for long-term EEG due to ASD. While epilepsy is indeed more prevalent in individuals with ASD, the diagnosis of autism itself does not constitute a sufficient reason to perform long-term EEG in the absence of a clear seizure suspicion. This pattern reflects a concerning drift toward defensive or exploratory use of EEG, which may expose vulnerable patients and families to procedures with unclear benefit and potential for harm. The clinical community must now confront a key question: are we using long-term EEG to answer a clinical question, or simply because it is available? In some cases – particularly those involving non-epileptic behavioral events or isolated sleep disturbances – short-term EEG or no EEG at all may be more appropriate. The reflexive application of long-term monitoring risks shifting EEG from a diagnostic tool to a source of diagnostic confusion. Looking ahead, the integration of artificial intelligence tools in EEG analysis offers promise for improving workflow and detection of electrographic events. Yet, these systems must not be viewed as replacements for clinical expertise. Overreliance on automated analysis may compound the very interpretative errors we are trying to avoid – particularly in diagnostically uncertain or low-yield populations. Artificial intelligence should support, not replace, expert judgment grounded

in well-justified clinical reasoning. In conclusion, long-term EEG remains a valuable tool in the evaluation of epilepsy – but only when used judiciously, in patients with a strong clinical rationale. The expansion of its use into broader, less clearly indicated populations demands careful re-evaluation. Optimizing referral criteria is not just a matter of resource allocation, but of safeguarding diagnostic integrity and patient well-being. Without such restraint, the risk of overinterpretation, misdiagnosis, and unnecessary treatment will only continue to grow.

DISCLOSURES

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REFERENCES

1. Hauser WA, Annegers JF, Kurland LT. Incidence of epilepsy and unprovoked seizures in Rochester, Minnesota: 1935–1984. Epilepsia 1993; 34: 453-468.
2. Alving J, Beniczky S. Diagnostic usefulness and duration of the inpatient long-term video-EEG monitoring: findings in patients extensively investigated before the monitoring. Seizure 2009; 18: 470-473.
3. Peltola ME, Leitinger M, Halford JJ, Vinayan KP, Kobayashi K, Pressler RM, et al. Routine and sleep EEG: minimum recording standards of the IFCN and ILAE. Clin Neurophysiol 2023; 147: 108-120.
4. Hasan TF, Tatum WO. When should we obtain a routine EEG while managing people with epilepsy? Epilepsy Behav Rep 2021; 16: 100454.
5. Hernandez-Ronquillo L, Thorpe L, Feng C, Hunter G, Dash D, Hussein T, et al. Diagnostic accuracy of ambulatory EEG vs routine EEG in patients with first single unprovoked seizure. Neurol Clin Pract 2023; 13: e200160.
6. Burkholder DB, Britton JW, Rajasekaran V, Fabris RR, Cherian PJ, Kelly-Williams KM, et al. Routine vs extended outpatient EEG for the detection of interictal epileptiform discharges. Neurology 2016; 86: 1524-1530.
7. Cascino GD, Trenerry MR, So EL, Sharbrough FW, Shin C, Lagerlund TD, et al. Routine EEG and temporal lobe epilepsy: relation to long-term EEG monitoring, quantitative MRI, and operative outcome. Epilepsia 1996; 37: 651-656.
8. Tatum WO, Winters L, Gieron M, Passaro EA, Benbadis S, Ferreira J, et al. Outpatient seizure identification: results of 502 patients using computer-assisted ambulatory EEG. J Clin Neurophysiol 2001; 18: 14-19.
9. Alapati A, Gilliam F, Faught E, Khan A, Black L, Kuzniecky R. A prospective randomized comparison of outpatient and inpatient video/EEG monitoring for presurgical evaluation in temporal lobe epilepsy. Epilepsia 1998; 39: 198-199.
10. Chang BS, Ives JR, Schomer DL, Drislane FW. Outpatient EEG monitoring in the presurgical evaluation of patients with refractory temporal lobe epilepsy. J Clin Neurophysiol 2002; 19: 152-156.
11. Koepp MJ, Farrell F, Collins J, Smith S. Prognostic value of long-term ambulatory EEG in antiepileptic drug reduction in adults with learning disability and epilepsy in long-term remission. Epilepsy Behav 2008; 13: 474-477.
12. Chayasirisobhon S, Griggs L, Westmoreland S, Kim CS. The usefulness of one to two hour video EEG monitoring in patients with refractory seizures. Clin Electroencephalogr 1993; 24: 78-84.
13. Watemberg N, Tziperman B, Dabby R, Hasan M, Zehavi L, Lerman-Sagie T. Adding video recording increases the diagnostic yield of routine EEGs in children with frequent paroxysmal events. Epilepsia 2005; 46: 716-719.
14. LaFrance WC, Baker GA, Duncan R, Goldstein LH, Reuber M. Minimum requirements for the diagnosis of psychogenic nonepileptic seizures: a staged approach. Epilepsia 2013; 54: 2005-2018.
15. Eddy CM, Cavanna AE. Video-EEG investigation of ictal alterations of consciousness in epilepsy and non-epileptic attack disorder: practical considerations. Epilepsy Behav 2014; 30: 24-27.
16. McBride AE, Shih TT, Hirsch LJ. Video-EEG monitoring in the elderly: a review of 94 patients. Epilepsia 2002; 43: 165-169.
17. Velis D, Plouin P, Gotman J, Lopes da Silva F; ILAE DMC Subcommittee on Neurophysiology. Recommendations regarding the requirements and applications for long-term recordings in epilepsy. Epilepsia 2007; 48: 379-384.
18. American Clinical Neurophysiology Society. Guideline 12: Guidelines for long-term monitoring for epilepsy. Am J Electroneurodiagnostic Technol 2008; 48: 265-286.
19. Chen LS, Mitchell WG, Horton EJ, Snead OC. Clinical utility of video-EEG monitoring. Pediatr Neurol 1995; 12: 220-224.
20. Ghougassian DF, d'Souza W, Cook MJ, O'Brien TJ. Evaluating the utility of inpatient video-EEG monitoring. Epilepsia 2004; 45: 928-932.
21. Nordli DR Jr. Usefulness of video-EEG monitoring. Epilepsia 2006; 47: 26-30.
22. Riquet A, Lamblin MD, Bastos M, Bulteau C, Derambure P, Vallee L, et al. Usefulness of video-EEG monitoring in children. Seizure 2011; 20: 18-22.
23. Bennett-Back O, Uliel-Siboni S, Kramer U. Yield of video-EEG telemetry evaluation for non-surgical candidate children. Eur J Paediatr Neurol 2016; 20: 848-854.
24. Uldall P, Alving J, Hansen LK, Kibaek M, Buchholt J. The misdiagnosis of epilepsy in children admitted to a tertiary epilepsy centre with paroxysmal events. Arch Dis Child 2006; 91: 219-221.
25. Salinsky M, Kanter R, Dasheiff RM. Effectiveness of multiple EEGs in supporting the diagnosis of epilepsy: an operational curve. Epilepsia 1987; 28: 331-334.
26. Thompson JL, Ebersole JS. Long-term inpatient audiovisual scalp EEG monitoring. J Clin Neurophysiol 1999; 16: 91-99.
27. Miskin C, Carvalho KS, Valencia I, Legido A, Khurana DS. EEG duration: the long and the short of it. J Child Neurol 2015; 30: 1302-1307.
28. Fohlen M, Bulteau C, Jalin C, Jambaqué I, Delalande O. Behavioural epileptic seizures: clinical and intracranial EEG study in 8 children with frontal lobe epilepsy. Neuropediatrics 2004; 35: 336-345.
29. Kobayashi K, Oka M, Inoue T, Ogino T, Yoshinaga H, Ohtsuka Y. Characteristics of slow waves on EEG associated with epileptic spasms. Epilepsia 2005; 46: 1098-1105.
30. Panzica F, Franceschetti S, Binelli S, Canafoglia L, Granata T, Avanzini G. Spectral properties of EEG fast activity ictal discharges associated with infantile spasms. Clin Neurophysiol 1999; 110: 593-603.
31. Balal M, Demir T, Bozdemir H. Epileptic seizure and nonepileptic psychogenic seizure differential diagnosis in primary health care. Turk J Fam Pract 2016; 10: 105-108.
32. Kwan P, Brodie MJ. Early identification of refractory epilepsy. N Engl J Med 2000; 342: 314-319.