Sudden Unexpected Death in Epilepsy (SUDEP)

Tackling Epilepsy in a DGH: Seizing NICE Quality Standards and Auditing Against Current Practice

Guidance for management, especially in children. We conducted a multi-centre retrospective service evaluation to better understand current practice.

Methods

Children diagnosed with IIH from nine centres in the UK over a 3-year period were retrospectively studied. Patient demographics, clinical details at presentation and follow-up, comorbidities, investigations, and medications were recorded and analysed.

Results

105 patients (71 females) with IIH, median age 11 [IQR 5–13] were recruited. Overall, record keeping was suboptimal with no recorded weight in 33% (43/105), height in 64% (68/105); and visual acuity in 24% (26/105). At presentation 42/62 (67%) of the patients had weight >90th centile, behavioural issues were reported in 15/63 (23%) and missing school in 9/43 (20%). Papilloedema was reported in 98/105 (93%) at baseline and in 87/105 (82%) at 6 months. Median GA opening CSF pressure was 34 (IQR 28 to 40) cm H2O and non-GA was 32 (IQR 25 to 39). 1/105 (0.9%) had ICP monitoring and 1/105 (1%) had shunt.

34 (69%) were seen by an ophthalmologist and 48 (45%) had no record of either orbital US scan or OCT. Only 16 (15%) had MRV and/or MRA. 51 (48%) had LP under GA, of whom only 10 (19.6%) had CO2 monitoring recorded. 92/105 (87%) received acetazolamide, however 25/92 (27%) had no record of either orbital US scan or OCT. Only 16 (15%) had ICP monitoring and 1/105 (1%) had shunt.

73 patients were treated with acetazolamide. 25/92 (27%) had acetazolamide without electrolytes checked during acetazolamide therapy. 105 (87%) received acetazolamide, however 25/92 (27%) had acetazolamide without electrolytes checked during acetazolamide therapy.

Conclusions

This project highlights significant variation in the way that IIH is being investigated and managed in the UK. This variation is likely to reflect the paucity of evidence, but risks over-diagnosis and inappropriate management. These results should be used to form the basis for a national consensus for the diagnosis and management of IIH in young people.

SUDDEN UNEXPECTED DEATH IN EPILEpsy (SUDEP) DURING SLEEP IN THREE 17-YEAR-OLD ADOLESCENTS WITHOUT INTELLECTUAL DISABILITY

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Aim

To report risk factor(s) that might have led to SUDEP in three similar cases.

Methods

Case note reviews; post-mortem reports; interviews with bereaved guardians/parents.

Results

17-year-old male had juvenile-onset generalised epilepsy diagnosed with onset at age 15. His generalised tonic-clonic seizures (GTCS) were mainly nocturnal; controlled with Valproate and Levetiracetam. His father saw playing on his computer at 1030 pm and was found dead in his bedroom floor in early morning. No structural brain lesion demonstrated on postmortem except incidental right temporal pole arachnoid cyst. 17-year-old male with generalised epilepsy with febrile seizures (GEFS+) with onset at age 2. His GTCS were relatively infrequent and only during intercurrent illness and had been treated with Valproate. He had been playing video-games throughout the night and went to bed the following evening. He was found dead at 930 pm face down in his bed. 17-year-old female had presented with first episode of GTCS secondary to previously undiagnosed autoimmune hypothyroidism at age 15. Her Hashimoto encephalopathy was treated with steroids and thyroxine. After the initial presentation, no GTCS were reported. She was on thyroxine with no anti-epileptics. She had headache the day before. She was found dead face down in her bed in the early morning.

Discussion

SUDEP typically affects 1 in 4500 children. Risk factors for SUDEP are young age, male sex, early onset, GTCS, and being in bed. Sodium channel mutation epilepsies are an at-risk group for SUDEP. In this review, all three patients were aged 17 years and manifested only GTCS of varying aetiology. They had no intellectual disability or known poor compliance. All had been asleep in bed prior to SUDEP.

Conclusions

All three adolescents were sleep-related SUDEP. Potential strategies for prevention include avoiding sleep deprivation, counselling adolescents with sodium channel epilepsies and considering nocturnal seizure detection device.

PREDICTIVE VALUE OF ELECTROENCEPHALOGRAPHY FOR DEVELOPMENTAL OUTCOME AT 6 MONTH OF AGE IN FULL TERM NEONATES WITH SEIZURES

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Background

Electroencephalography (EEG) is an important tool to evaluate infant with symptoms refer to central nervous system. The objective of the work was to study the predictive value of EEG for developmental outcome in full term neonates with seizures at 6 month of age.

Methods

This was prospective observational study at tertiary care centre, Gandhi Medical College, Bhopal. The participants were full term hospitalised neonates with documented seizures. Newborns admitted for complaints other than seizures, hypoxic ischaemic encephalopathy (HIE) stage 1, preterm and neonates born to mother on antiepileptic therapy were excluded from the study.

Results

Out of total 108 registered neonates 14 expired and 10 lost to follow up. In remaining 84 cases, 36 (42.9%) had generalised discharge, 16 (19%) had focal and 6 (7.1%) had multifocal discharge while 44 (52.3%) had normal EEG patterns. HIE being the most common cause and subtle seizure being the most common type of seizures. On follow up at 6-month, all neonates with normal EEG pattern (n=44) had normal developmental outcome. Out of 40 neonates with abnormal EEG discharges, 26 (65%) had developmental delay, while 14 (35%) had normal development for age.

Conclusions

EEG could be a simple and cost-effective prognostic tool where neonates presenting with seizure. Newborn with abnormal discharge should be closely monitored on DDST for early identification and early intervention.

TACKLING EPILEPSY IN A DGH: SEIZING NICE QUALITY STANDARDS AND AUDITING AGAINST CURRENT PRACTICE

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Objectives

To compare our clinical practice against the NICE quality standards for children’s epilepsy service.