A NEADed Approach


Introduction
Non-epileptic Seizures superficially resemble those caused by epilepsy, but do not happen as a result of abnormal electrical discharges in the brain. The seizure burden for people with Non-Epileptic Attack Disorder (NEAD) is very high. Patients are often frequent and prolonged, causing a significant social impact, injuries and hospital admissions. The overall incidence is thought to be between 2–33 per 100,000, making it a significant neurological condition (Benbadis et al 2000).

The problem
More readily available video telemetry and video capture on mobile telephones, have made it much easier for experienced clinicians to diagnose NEAD. However, it’s treatment has proven more challenging, with very limited services available. Approaches based on Cognitive Behavioural Therapy (CBT) have the best evidence, but there is a paucity of good quality trials to investigate alternative treatments. In addition, there is very limited access to appropriate psychology services in many areas. Management pathways often involve referral to a tertiary. This can lead to very long waiting times for either the diagnostic confirmation or treatment (see graph 1). Attempts have been made to provide short interventions that could be delivered locally (NEST 2008). Some patients will be rendered seizure free simply by having the condition carefully explained and a very simple avoidance techniques taught (Hall-Patch et al 2010). However, the majority of these patients end up being seen in epilepsy services, often for many years, with little improvement in their seizures.

Results - Outcomes
The majority of patients showed symptom improvement following the involvement of the epilepsy nursing service. The average seizure frequency of our cohort reduced from 708 per month (20 per patient) to 347 per month (10 per patient). 11 patients achieved seizure freedom for more than 3 months, which is significant as this is the driving threshold for NEAD (see Graph 4). The 35 patients were seen 141 times from referral to the time of the audit. The average visits per patient was 4 (range 1 - 11).

All the patients were continuing under the review of the epilepsy nursing team (83%). 6 (17%) have been referred to the tertiary centre for treatment (with 2 of these remaining under epilepsy nursing review as well). One has been referred to the tertiary centre for further diagnostic evaluation and one discharged to the GP.

Levels of diagnostic certainty of NEAD

This was measured using the International League Against Epilepsy (ILAE) scheme (La France et al 2013). Possible indicates consistent history, event described by witnesses or patient with no epileptiform activity in routine or sleep deprived inter-ictal EEG. Probable is consistent history, event reviewed by clinician in person or video showing semiology typical of NEAD with no epileptiform activity in routine or sleep deprived inter-ictal EEG. Clinically established is consistent history, with the event reviewed by a clinician experienced in the diagnosis of seizure disorders, either in person or on video, while not on EEG with no epileptiform activity in routine or ambulatory ictal EEG during a typical event, the semiology of which, would make ictal epileptiform EEG activity expected during equivalent epileptic seizures. Documented is a consistent history, an event reviewed by clinician experienced in the diagnosis of seizure disorders showing semiology typical of NEAD whilst on video EEG. No epileptiform activity immediately before, during or after the event captured on ictal video EEG with typical NEAD semiology.

Outcomes of feasibility pilot
At the time of preparation, 6 patients had completed the pilot, with a further cohort of 4 patients undertaking it in October/November 2019. Initial results were:

• All patients chose the ACT pathway
• All patients felt that the therapy was useful to them – all had previously tried CBT type therapy
• Although direct seizure reduction was not a primary aim of the pathway, patients were seizure free following the course and one is applying for the return of her driving licence
• There were insufficient feedback forms returned at the time of poster preparation for formal evaluation to be presented
• Further dissemination via a peer reviewed journal is planned following the completion of the pilot phase

Conclusions
The audit results confirm that some people with NEAD will see their seizures improved significantly, around a third to the point of seizure freedom, with basic psycho-educational intervention, delivered in a clear and consistent manner by knowledgeable professionals. However, two thirds of people will continue to have frequent non-epileptic attacks. The impact of these can be significant from a psychological viewpoint. While long sessions of CBT have been shown to be helpful, our audit has demonstrated the enormous waiting lists for tertiary treatment, and such programmes may be beyond the ability of most local services to deliver. We believe that a short intervention would be deliverable more readily in the NHS. If our pilot results look promising, we would look to develop a multicentre trial for the intervention.

References
CE (2003).
Are there physical risk factors for psychogenic nonepileptic seizures in the general population? A meta-analysis. Neurology Vol 51, issue 1
References