

Presentation from ***EPILEPSY: TOP OF MIND*** symposium
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Epilepsy: Top of Mind Symposium Seizure, Behaviour or Mannerism



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Childhood Epilepsy Syndromes

Epilepsy - most common chronic neurological problem.

Prevalence of 10-30/1000 children

Highest incidence in first decade of life

4 -10 % of all children & adolescents will experience a seizure.



EPILEPSY

- What Does it Mean?
- How is it Diagnosed?



Paroxysmal Non epileptic Events that mimic szs

- Vasovagal Syncope
- Breath holding spells
- Sleep Parasomnias
- Migraines
- Movement Disorders
- NEE – Pseudo seizures
- Metabolic phenomenon
- CVAs, other neurological conditions
- Gratification phenomenon
- Hallucinogenic drugs
- Adverse effects from drugs

Approach to an episodic event

- History of seizures / episodic events:
when, where, how often
what provokes them, what makes them worse
what happens during the event (demonstration, video)
can it be stopped: If so how
what happens after the event
any incontinence
- Developmental History:
prior to onset and subsequently
- Family History
- Investigations undertaken / Management

Breath holding Spells

- ~ 4-5 %, non volitional
- Usual onset between 6-18 months
- Cyanotic and pallid
- Syncopal episodes may occur in late childhood or adolescence in ~20%
- ?ECG, ?EEG
- Iron deficiency may play a role- Fe important for catecholamine metabolism and neurotransmitter function.
- Help parents

Shuddering Episodes

- Infants
- may be isolated events
 - brief shivering movements :1-2 sec,
 - head & trunk posturing before or during brief shivering:1-2 sec
 - or a period of slightly prolonged posturing followed by brief movement of the head :5 sec, occ eye movement (Bye et al, 2000)
- May develop essential tremor later

Opsoclonus Myoclonus Syndrome

- Opsoclonus, Myoclonus, Ataxia, Encephalopathy
- Associated with
 - Viral infections
 - Neuroblastomas
 - Intoxications, Hydrocephalus
- Immunologically Mediated
- Treated with ACTH, Steroids, Gamma globulin, immunosuppressants
- Long term Neurodevelopmental Disability



Characterisation of Paediatric Sleep Events

Important

- Common
- May be Frightening or Disruptive
- Small risk of injury
- Need for Intervention / Investigations
 - Guilleminault '82, Labarge '00



Paediatric Sleep Events – History Most Important

- Majority of paroxysmal events in sleep are non epileptiform (Rosen,95)
- Parasomnias
- Sleep Phase Disorders
- Sleep Related breathing Disorders
- Epileptiform Events

Paediatric Parasomnias

- are common
 - Somniloquy, sleep bruxism, sleep terrors, somnambulism, enuresis, rhythmic movement disorder
- may be primary or secondary
- Many self limiting and may not persist into adult life.
- Disorders of
 - Arousal - from NREM
 - Parasomnias from REM
 - Sleep Related movement disorders
 - others
- Multifactorial aetiology

Arousal Disorders – NREM sleep Disorders

□ Confusional arousals

- Toddlers preschoolers
- First third of sleep
- Almost every child sometime
- ~5 -15%, usually 5 – 15 minutes

□ Sleep walking

□ Night Terrors

- 1%
- 3-10 years
- First third of night
- Prominent autonomic features,
- movements, look panicked, confused,
- FH+



Sleep Wake Transition Disorders and other Parasomnias

- Rhythmic Movement Disorder of sleep
- Sleep startles
- Sleep talking
- Sleep Onset Association Disorders
- Others
 - Bruxism
 - Benign Neonatal Sleep Myoclonus
 - REM Sleep Behaviour Disorder
 - SRED, SRSD
 - Catathrenia

Differentiating non epileptiform events from epileptiform

- **Age at Onset:** NFLE and NREM arousal disorders, start in kids
 - Parasomnias – earlier:
 - night terrors –peak 5 -7 years
 - Somnambulism peak ~10
 - NFLE – later: mean age ~14
- **Duration:**
 - Parasomnias - ~7 years
 - NFLE – average 20 years



Non Parasomnic Nocturnal events

- Pseudo seizures
- Panic attacks
- GE reflux
- Movement Disorders
- Sleep Related Breathing Disorders
 - Apnoeas, hypopnoeas, periodic breathing
 - Central, Obstructive
- Seizures -
 - Frontal lobe Epilepsy
 - Other Focal epilepsies
 - Generalised Seizures



Tic Disorders

- Common, underdiagnosed
- Transient - ?upto 20%
- Drug Related
- Chronic Tic Disorder 1-2%
- Tourette Syndrome ~2-3%
- PANDAS



Parent Power: Seizure, Behaviour or Mannerism

- Observation / Video
- When, Where, Why, What
- Can You bring it on, Can you stop it
- Awareness during event
- Responsiveness during event
- Repetitiveness, Stereotypical
- Interrupt interesting activity
- **Your opinion !**
- Medical Opinion, investigations, therapeutic trial.