Very difficult behaviour in children with epilepsy: (Psychiatry & Neuroscience)

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Very difficult behaviour in children with epilepsy:

Psychiatry & Neuroscience:

Plan of Presentation:

• Context
• Routes to Difficult Behaviour in Epilepsy
  • Coping & Adjustment
  • Psychiatric Diagnoses
• Managing Behaviour
Epilepsy & Child Mental Health

• Up to 50% require extra support in school
  – Learning difficulties and seizure activity
  – Cognitive side effects of AEDs

• Stigma & growing up with uncertainty

• Raised rates of LD (28-38%)

• Raised rates of mental disorder (37%, ONS)
  • Depression/Anxiety/Adjustment Disorder
  • ADHD in up to 30-50%*
  • ASD in 30-60%*

• CAMHS may resist referrals with Epilepsy
Epilepsy & Aggression (Proceed with Caution*)

Case studies of Aggression in Epilepsy

- Onset age 15, male multiple psychiatric diagnoses before epilepsy diagnosis (18)
- Frontal Seizures causing ‘directed & interactive aggression’
- Rare but medico-legally important
- Agency Ownership & Responsibility

*Editorial, Fessler & Tremain, Neurology, 2009
Very Difficult Behaviours

- Disruptive Behaviours
  - Aggression, Emotional Dysregulation, Distress
  - Impulsivity
  - Oppositionality, Conduct Disturbance
- Social Withdrawal
- Self Injurious Behaviours
- Illness Behaviours
- Behaviour linked to Perceptual Disturbance
- Behaviour linked to Cognitive Impairment
Integrated Theory of Epilepsy & Behaviour - Austin & Caplan 2007

Family Stressors
- from epilepsy
- life stress
- psychopathology

Epilepsy factors
- seizure variables
- CNS pathology
- AEDs & control

Comorbid Deficits
- cognitive
- linguistic

Family Adaptive Resources

Coping Strategies
- parenting style
- child coping style

Perceptions
- of epilepsy & co-morbid deficits

Family Adjustment

Child Behaviour Problems
Coping & Adjustment

• **Adjustment** implies managing with minimum secondary disorder or disability

• **Coping**: Changing thoughts & behaviour to manage distress and the problem underlying the distress in the context of a specific stressful encounter or situation
  
  – Chronic Illness in Children and Adolescents; Brown, Daly & Rickel, 2007
Vulnerability & Resilience

Dependent & Independent factors

- **Constitutional** factors ‘independent’ of disease
- **Constitutional** vulnerabilities/strengths related to disease
  - eg behavioural phenotype & epilepsy (ring 20)
- **Experience** ‘independent’ of disease
- **Experience** related to disease (eg Stigma)
Impact of Seizures on Adjustment

• Symptom perception
  – Accuracy linked to ability & knowledge
  – Also links to other factors (e.g., past experience, cultural beliefs)
  – Impact of first seizure
  – Effect of seizure control
  – Understanding of SUDEP
  – Accurate symptom perception is linked to better health outcome
CNS factors in Adjustment

• Non-specific association with behaviour

• Shared aetiology
  – Family genetics
  – Anatomical Variation & Brain Injury

• Difficult to Treat Epilepsy
  – Regression or Loss of Skills
  – Specific Associations
  – Polypharmacy
Psychiatric Diagnoses:  
Behaviour in Relation to Seizures

‘Organic Psychiatric Disorders’:
• **Ictal state** – Behaviours that are direct expressions of the epileptic seizure.
• **Periictal** (Pre- or Postictal) – Behaviour temporally associated with but not directly a manifestation of epileptic discharges.
• **Paraictal** – Behaviour related to ongoing seizure disorder.

‘Functional Psychiatric Disorders’:
• **Interictal** – Behaviours that are a function of non-ictal conditions.
“Melancholics ordinarily become epileptics, and epileptics melancholics: What determines the preference is the direction the malady takes; if it bears upon the body, epilepsy, if upon the intelligence, melancholy.”

Depression in Epilepsy

1) Intrinsic to epilepsy:
   (neurochemical and neurophysiological changes in the limbic circuit)
   - Ictal Phenomena (may be severe)
   - Periictal Dysphoria
   - Interictal Depression.

2) Side effect of AEDs.

3) Problems in adjustment to epilepsy.

4) Precise Diagnosis may be unclear

5) Raised Suicide risk (up to 10x)
Anxiety in Epilepsy

- **Ictal** fear/anxiety
  - fairly common & usually brief
  - Linked with discharges of the anteromedial temporal lobe or limbic system

- **Pre or Postictal**, lasting for hours to days

- **Interictal** Anxiety syndromes occur in both TLE and generalized epilepsy.

- Anxiety may lead to disruptive behaviour, especially with cognitive impairments
Non-Epileptic Seizures

- Clinic sample of 22 children <13 (Patel 2007)
  - 68% had Epilepsy
  - Often Stereotyped NES (‘Habitual’)
  - School Problems/ Other Stressors
  - > ??Seizures as Stressor
- Conversion disorder?
- Neurologically Unexplained Symptom
- **May be severe** hidden cause of Disability
Ictal Psychosis
(Features)

- Olfactory, Gustatory, Visual or Auditory Hallucinations (often poorly defined, may be complex)
- Paranoid or Grandiose thoughts
- Frontal or Temporal automatisms
- **Behavioural Challenge that may resolve with epilepsy treatment**

→ Non-convulsive status epilepticus can be mistaken for other psychiatric illness
Postictal Psychosis

- Confusion, automatism, wandering, delusions, hallucinations & inappropriate behaviour.
- Recurrence is common.

Interictal Psychosis

- schizophrenia like, possibly linked to temporal lobe pathology in adults, if not children.
Anti NMDA* receptor encephalitis

- Behavioural Decline with Fear & Hallucination before Seizure onset.

- **Aggression, agitation, confusion.** Word finding & memory difficulties. Insomnia.

- Oligoclonal bands in CSF

- NMDA-R antibody positive

- Immune therapy responsive

*NMDA, N-methyl-D-aspartate*
Cognitive Impairments

• Language disruption
• Memory Impairments
• Temporary Confusional states
• ‘Dementia’
• Learning Disability
Developmental disorders & Behaviour

- High Rates of Comorbid Developmental Disorder
  - ASD, ADHD & Learning Difficulties

- **ESSENCE** concept (Gillberg 2010)
  (Early Symptomatic Syndromes Eliciting Neurodevelopmental Clinical Examinations)

  General development, Communication & language, Social inter-relatedness, Motor co-ordination, Attention, Activity, Behaviour, Mood & Sleep.
Developmental disorders & Behaviour

Early Symptomatic Syndromes Eliciting Neurodevelopmental Clinical Examinations

Dimensions of Behaviour, might include:
- Pathological Demand Avoidance
- Emotional Dysregulation
- Episodic Dyscontrol

Boundaries of ESSENCE
- Tics & Tourettes as indicators
- -> a new notion of Epilepsy
Attention & ADHD in Dravet Syndrome

- Onset in first year of life - febrile seizures
- Prolonged unilateral or generalized clonic seizures
- Other seizure type by 1-4 years
- 66% Hyperactive (Brunklaus et al)
- Who should treat ADHD?
SUMMARY

• Ictal or periictal behaviour tends to be brief and context-free.

• Emotional Disturbances are the most common psychiatric feature in epilepsy.

• Severity of CNS pathology may predict greater difficulty

• There is need to improve classification.

• Multiple factors contribute to severe behavioural disturbance especially:
  – Cognitive Impairments & Developmental Disorders  (ESSENCE)
  – Family/Social Vulnerability
Managing Epilepsy & Behaviour: an Integrated Approach

- Improve family supports and coping
- **Assess child’s neurodevelopment & advise**
- Recognise Specific Syndromes
- Optimise treatment of epilepsy
  - Manage seizures & associated/underlying disorder
  - Consider medication side effects
  - Consider family/system issues
- **Label/Treat child & family dysfunction**
  - Child/young person disorder
  - Parental psychopathology/ Family vulnerability
- May need interagency approach