

Epilepsy from Childhood to Adulthood

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Epilepsy: a Multidisciplinary Approach
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Common Parental Concerns

- What is epilepsy?
- Why does my child need medication and will they have side effects?
- How long will it last?
- Can it have an effect on my child's development, learning and growth?
- As an adult can it affect having children, getting married, having a job, driving license?



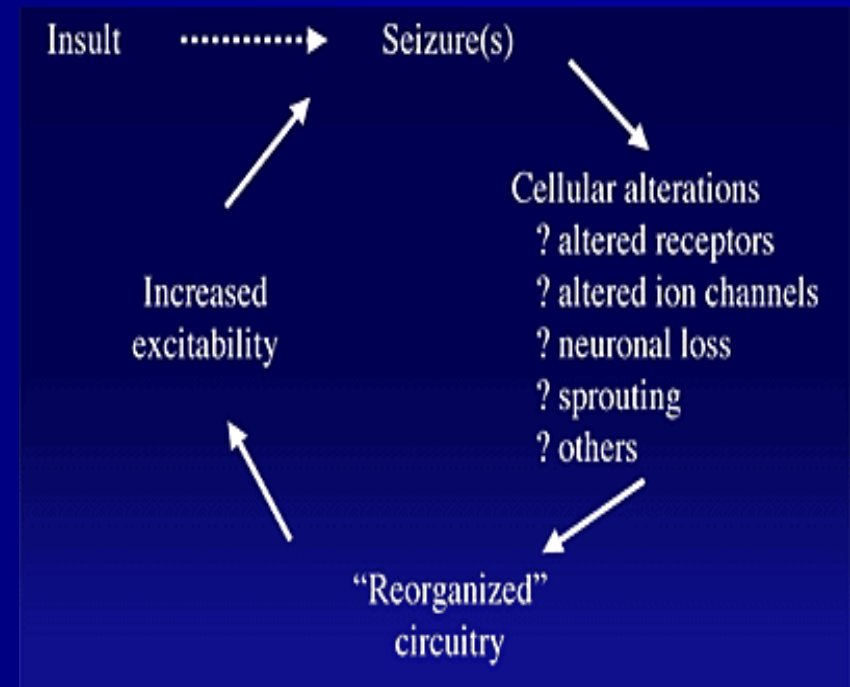
Epilepsy: Navigating from Childhood to Adulthood

- Understanding the Natural history of Childhood Epilepsy syndromes - help with treatment decisions
- Knowledge on the choice of AEDs & other therapies
 - Effect on cognition, attention, behaviour, growth, brain development and future reproductive function.
- Identifying Specific psychosocial issues
 - Effect on learning and peer relationships, choice of career, adolescent issues and QOL as an adult whether or not seizures are in remission



Nature of Epilepsy

- Complex Brain disorder: recurrent and unpredictable interruption of normal brain function
- Variable and evolutionary / progressive course
- Age related nature: children have different epilepsy syndromes to adults
- Changing needs at different ages
- Evidence for a changing pattern of pharmacoresistance
- Significant impact on health and well being



The kindling hypothesis in epileptogenesis. Adapted from Lynch MW et al. Curr Opin Neurol. 1996;9:97-102.

Childhood Epilepsy Syndromes

– Natural history

- Prognostic population follow up studies Finnish, Japanese, Dutch studies (Sillanpää M *et al Brain* (2006), Wakamoto H *et al Brain & Development* (2000), Arts WFM *et al Brain* (2004)).

Two main categories



'Smooth Sailing'



'Not so smooth sailing'

Childhood Epilepsy Syndromes

– Natural history



Benign remitting in
childhood

- CAE
- BECTS
- BEOS



Non benign

- Remitting in childhood :
MAE
- Continuous into adulthood-
Symptomatic Localization-
related epilepsies, LGS,
Dravet Syndrome, TLE

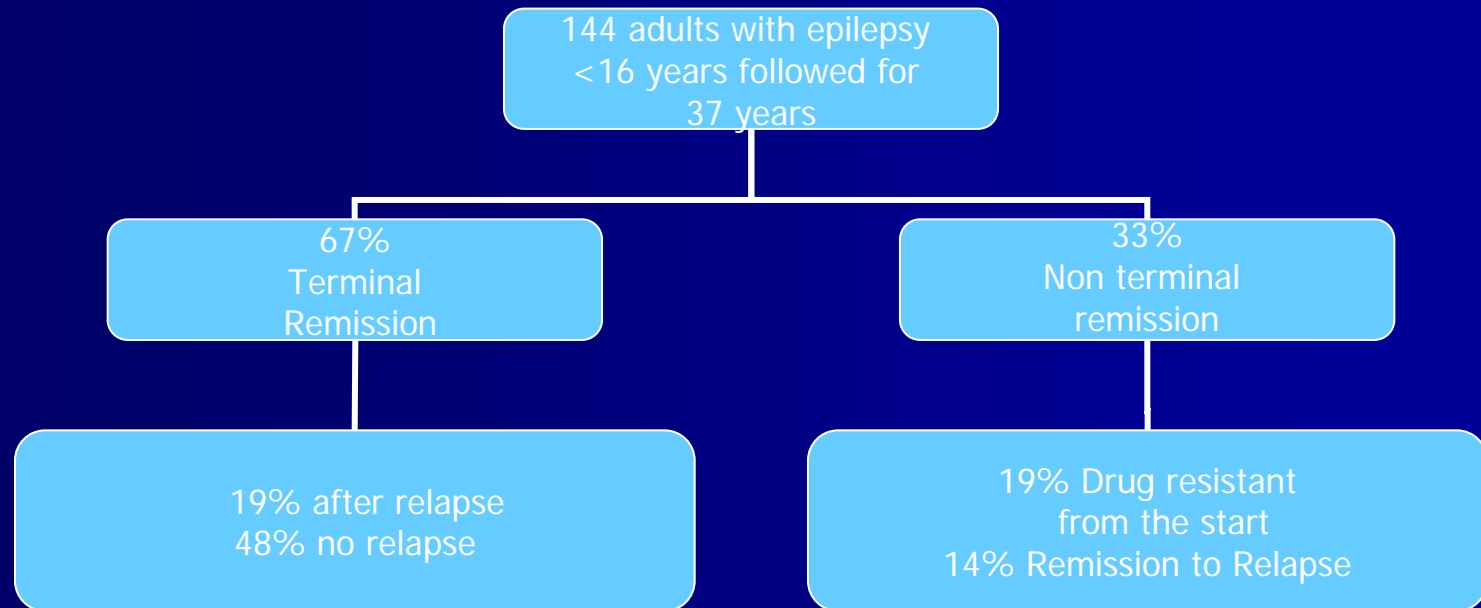
Long term Outcome as Adults: Seizure Control

- Seizures Control as an Adult:
 - Children with newly diagnosed epilepsy have a 61-75% chance of long term remission and being off medication
 - 10-25% variable course – relapsing and remitting.
 - 10-15 % become intractable and continue to adulthood and show an evolutionary course



Long term: Evidence for evolution of Drug Resistance in childhood-onset epilepsy

Silanpää M, Schmidt D Brain 2006,129, (617-624)



- Most children will respond to AEDs even years after start of treatment
- Small proportion show a worsening course or initial resistance to AEDs.
- Best results are in the idiopathic epilepsies.

Catastrophic Epilepsies – Evolution in Adults

- Infantile Spasms
 - 18-50% develop LGS
- Lennox Gastaut
 - Tonic seizures tend to become more common with time
 - IQ tends to decrease with time
 - With time may develop behavioural problems
- Temporal Lobe Epilepsy:
 - May show initial response than become resistant.

Long term Outcome – Educational

- Educational Outcome
 - Best in those with normal intelligence
 - Worst in those with catastrophic epilepsy
 - Learning disability – 76% of adults with childhood onset epilepsy – Specific LD, MR , Slow learners

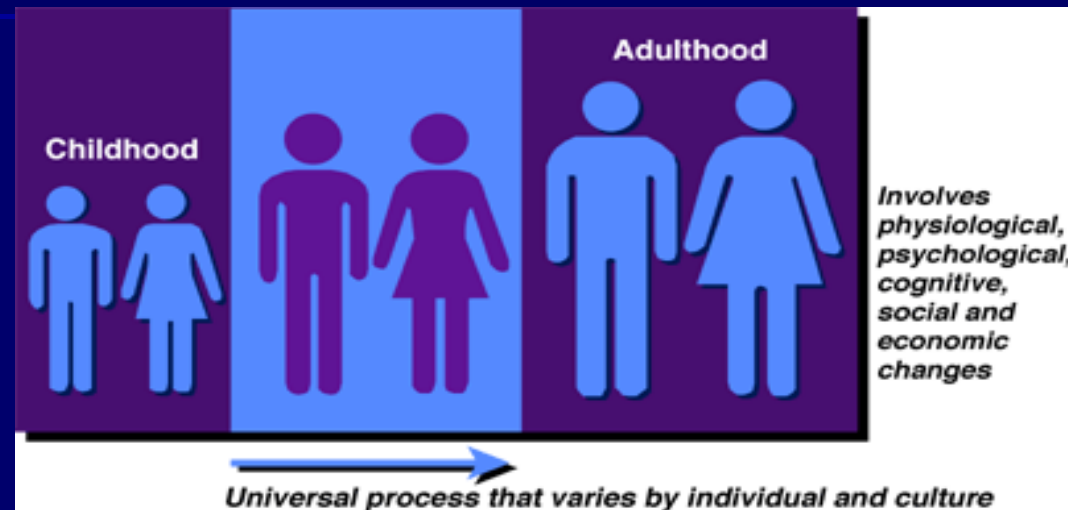


Long term Outcome – Social & QOL

- Future Social Outcome & QOL in children uncomplicated epilepsy
 - Marriage rate is lower than controls even in those with well controlled seizures
 - Employment rate is lower if epilepsy extends to adulthood and still on AEDs.
 - Employment rate same as controls in those with normal intelligence and off AEDs
 - License tenure: lower even in those with normal intelligence



Management Challenges



- Management of current epilepsy status and its effects on general level of functioning which contributes to well-being
- Management of the transition process from child to adult services
- Early recognition and addressing significant non-medical issues in the everyday clinical practice

Identifying Specific Care Issues

- Medical Issues - multiple

- Seizure control, Monitoring Side effects , weight gain, hair loss, addressing behavioural problems

- Non medical Issues

- Identifying significant psycho educational issues
- Ensuring a safe and effective transition from paediatric to adult care
- Future care plan with caretaker and guardians e.g Respite / residential care options



Multidisciplinary Plan of action

Health care practitioners
Social services and
Community agencies

Transition Care

- 3 issues need to be pursued
 - Cultural shift in staff attitudes and training
 - Need to have effective transition programmes in place esp for children with complicated epilepsy
 - Young persons need to be trained and empowered to allow them to be an effective partner in their own transition

(Viner RM Arch Dis Child 2008)



Future Challenges – Some questions

- Service provision
 - Multidisciplinary work
 - Role of Epilepsy nurse specialist
 - Residential school for children with intractable epilepsy
- Research
 - Could we prevent refractory epilepsy?
 - Will anti epileptogenic medication improve outcome especially in children by suppressing possible seizure brain injury?
 - Will genetic studies give us an insight into specific modes of treatment or prevention of drug resistance?
 - Applying QOL Scales in everyday clinical practice?



Thank you

