

Tuesday, 2:30 – 4:00, C3

Epilepsy, Psychosis and Intellectual Disability

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Objective:

1. Identify effective methods for the practical application of concepts related to improving the delivery of services for persons with developmental disabilities
2. Identify advances in clinical assessment and management of selected healthcare issues related to persons with developmental disabilities
3. Identify and emphasize attitudes that enhance the opportunities for persons with DD to achieve their optimal potential
4. Develop strategies to promote community inclusion in meeting the needs of persons with developmental disabilities
5. Develop assessment and management strategies for individuals with epilepsy, ID and psychosis

Notes:

**Epilepsy and Psychosis in IDD:
Whose on First?**

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Goals

- Try to make sense out of this combination of heterogeneous disorders
- Understanding of the role of co-occurring genes in each of these disorders
- Issues in differential diagnosis- boundary problems, everything that is odd is not necessarily epilepsy
- Treatment ideas if you happen to have all 3

Epilepsy

- Disorder with seizures is the primary symptom
- Etiology- idiopathic, cryptogenic, symptomatic, developmental
- Subtype of seizure- generalized, partial, myoclonic, mixed
- Age on onset, difficulties with management, prognosis

Seizures

- Sleep related events
- Cerebrovascular events- TIAs, CVA
- Cardiovascular events- syncope, arrhythmias,
- Migraine aura
- Metabolic events- hypoglycemia
- Electrophysiological events
- Psychiatric events- panic, dissociation

Seizures- electrophysiological events

- Sudden onset
- Rapid development of positive symptoms
- Brief
- Intrusive
- Stereotyped experiences or behaviors
- Depending on the type of seizure, post-ictal changes
- Generalized seizures- Prolactin release

Diagnosis of a Seizure

- Clinical events- good observer is often most helpful
- Neurological status of the individual, intellectual disabilities, hemiparesis, neurodevelopmental disorders
- SUDs and Withdrawal seizures
- Metabolic status
- Mystique of EEGs, MRIs

Epilepsy syndromes

- More commonly associated with brain abnormalities, developmental disabilities
- Multiple seizure types
- Neurodegenerative changes in some myoclonic epilepsy
- Difficult to control- contribution to neuropsychiatric disorders
- Multi-drug regimens- adverse effects of some AEDs

Subtypes of Complex Partial Seizures

- Most common type in adults, differential diagnosis of frontal v. temporal onset
- Symptomatic seizures secondary to traumatic brain injury
- Mesial temporal sclerosis (MST)- higher rates of medically refractory
- Tumors- abnormal tissue, faulty migration of nerve cells, higher rates of psychosis and neuropsychiatric disorders

Neuropsychiatric Disorders and Epilepsy

- Diagnostic overshadowing- is it a seizure or a behavior
- Is it anxiety related? Psychogenic nonepileptic seizures
- Is it another paroxysmal disorder?
- Is this a manifestation of underlying brain disease?
- Temporal profile of symptoms- iatrogenic

Neuropsychiatric Disorders and Epilepsy

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Differential Diagnosis of Fits and Spells

- Ictal symptoms- brief, stereotyped changes
- Relationship of symptoms to established seizures
- Psychosis- paroxysmal changes, several subtypes
- Atypical symptoms, clinical course treatment response
- Judge by the company the symptoms keep
- Nonspecific behavioral disorders

Nonspecific Behaviors, Epilepsy and Developmental Disabilities

- Relationship to established seizures
- Ictal criteria
- Aggression- complex relationship, ictal violence is rare, poorly directed; post and interictal aggression more common
- Effects of co-existing brain disorder
- Frontal lobe seizures- highly stereotyped, complex behavior but not planned or instrumental aggression

Psychiatric symptoms-established seizure disorder

- Chance occurrence of epilepsy and genetic risk for primary psychiatric disorder- impact on clinical symptoms and treatment
- Prodromal symptoms- build-up to a seizure- mood and anxiety symptoms are common, improvement with ictus.
- Ictal psychiatric symptoms- meet seizure criteria, lateralization-localization issues

Psychiatric Symptoms –cont'd

- Post-ictal- relationship to delirium, altered responses to environmental stimuli, aphasia, lowered threshold for aggression. Lucid period followed by psychiatric symptoms
- Interictal- between seizures, clear sensorium, lateralization might play a role, irritability, pedantic language, viscosity, and fluctuations in mood

Psychoses, Epilepsy, Developmental Disorders

- CPSs are most common, early onset, poor control, lesion etiology, F>M
- Cluster of seizures, lucid period, psychosis and high risk for aggressive behaviors
- Decreased seizure frequency, positive symptoms, preserved affect and emotional reactivity
- May worsen with better seizure control

Treatment issues

- Is this a primary psychiatric disorder?
- Are the psychiatric symptoms related to the underlying cause of the epilepsy?
- How do the psychiatric symptoms relate to the seizure?
- Iatrogenic causes- adverse side effects or metabolic changes secondary to AEDs
- Poorly controlled seizures- secondary brain dysfunction

Treatment- AED problems

- In CPSs, role of Phenobarbital, increased rates of depression/suicide
- Folate deficiency, carnitine depletion, pyridoxine effects with Keppra
- Hyponatremia from CBZ derivatives
- High serum levels- neurotoxicity and cognitive deterioration
- Drug-drug interactions

Psychotropic Drug Effects

- Direct effects on seizures- APDs, TCAs, aminoketones may lower threshold
- Carbamazepine may lower serum levels of many psychotic drugs by induction, rendering meds less effective
- SSRIs and effects on AED blood levels
- Increase free drug fraction by competing for protein binding sites
- AEDs as mood stabilizers, lamotrigine antidepressant effects

Antipsychotic Drugs

- Common problems: drug-drug interactions; lowering seizure threshold; EPS confused with SZ, metabolic –folate, B6, Vit D3 depletion by anticonvulsants
- When to change APD or AEDs- psychoses-ictally related; post-ictal, interictal states
- When to stop them- late emergence of psychosis, SIB, irritability, aggression may be more problematic

Conclusions

- Differential diagnosis is the key to rational Rx
- Weigh factors related to IDD; risk for psychosis; how to monitor rx response and side effects; metabolic effects of both ARDs and APDs; comorbid neurodevelopmental disorders
- Carefully consider when to start and when to possible stop APDs
