# PSYCHIATRIC SYNDROMES IN EPILEPSY

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# DEFINITION

An intermittent, stereotyped disturbance of consciousness, behaviour, emotion, motor function or sensation that on clinical grounds is believed to result from cortical neuronal discharge (Chadwick, 1994)

# PREVALENCE OF PSYCHIATRIC PROBLEMS IN EPILEPSY

- Pond and Bidwell (1960) -245 patients in Southeast England. 29% showed conspicuous mental problems. 7% had psychiatric inpatient care.
- Edeh and Toone (1987) – 88 patients in general practice in South England. 31% had H/0 psychiatric referral, 48% had significant psychiatric morbidity.

# FENTON'S CLASSIFICATION

- disorders clearly attributable to the brain disorder causing epilepsy
- disorders strictly related in time to seizure occurrence
- interictal psychiatric disorders

# DISORDERS CLEARLY ATTRIBUTABLE TO THE UNDERLYING BRAIN DISORDER CAUSING EPILEPSY

- Learning disability
- Specific epileptic syndromes
  - West syndrome
  - Lennox- Gastaut syndrome
  - Others
- Cognitive and behavioural manifestations of other acquired causes of epilepsy

# DISORDERS TEMPORALLY RELATED TO THE OCCURRENCE OF SEIZURES

- Pre-ictal- Prodrome
- Ictal- Psychiatric manifestations of seizure activity such as aura, automatisms, non-convulsive status epilepticus
- Postictal- Delirium, Psychosis

# INTERICTAL DISORDERS

- Affective disorders
- Schizophrenia- like psychosis
- Personality disorder/ behaviour disorder
- Dementia
- Dissociative seizures

# AUTOMATISMS

- Oro- alimentary
- Mimetic
- Manual or pedal
- Gestural
- Hyperkinetic
- Hypokinetic

# AUTOMATISMS (contd.)

- Dysphasic
- Dyscrastic
- Vocal
- Verbal
- Spontaneous
- Interactive

# DEPRESSION IN EPILEPSY

- Major depression- 17 to 21%
- Commonest clinical presentation- Chronic dysthymia
- Risk factors for depression-

  Poorly controlled seizures

  Temporal lobe epilepsy

  Family history

  Psychosocial factors- stigma, consequences of restrictions

# ANXIETY IN EPILEPSY

- Agoraphobia- “seizure- phobia”
- Generalized anxiety
- Social anxiety
- Benzodiazepine dependence

# EPILEPSY AND SUICIDE

- Risk factors- Psychiatric history
  Previous attempts
  Early onset of epilepsy
- No relationship with the type of epilepsy or localisation of a focus, presence of a neurological deficit

# SCHIZOPHRENIA- LIKE PSYCHOSIS

- High risk with chronic epilepsy
- 3 times higher
- Onset 15 years after the onset of epilepsy
- Paranoid symptoms common
- Catatonic symptoms rare
- Prognosis better with acute onset
- Overall progonosis like primary schizophrenia
- 64% follow a chronic course over a 10 - year period

# RISK FACTORS FOR PSYCHOSIS

- No relation with age of onset
- Localisation- related epilepsy
- PET- Different findings in studies :-
  reduced metabolism in frontal, temporal and basal ganglia regions
- SPECT – lowered cerebral blood flow in left medial temporal region, both thalami
  decreased blood flow in left superior temporal gyrus during verbal activation

# RISK FACTORS FOR PSYCHOSIS

- Widespread cerebral damage rather than regional abnormality is relevant
- Generalised or multifocal EEG abnormalities
- H/O CNS insult
- Abnormal neurological signs
- Lower IQ measures

# RISK FACTORS FOR PSYCHOSIS

- Findings from cases with temporal lobectomy
  - ❖ mesial sclerosis was less common than other lesions such as small cryptic tumours like hamartomas and focal dysplasia- called “alien tissue” lesions.
  - ❖ lesions involving medial temporal lobe structures were common
  - ❖ lesions arose in the fetal or early neonatal period

# RISK FACTORS FOR PSYCHOSIS

- Left- handedness
- Family H/O psychosis
- Family H/O epilepsy

# AETIOLOGY OF PSYCHOSIS IN EPILEPSY

- Biological antagonism- “forced normalisation” of EEG
- ? Chance association
- ?Precipitation in genetically predisposed individuals
- ?Disability associated with epilepsy
- ? Antiepileptic drugs –Ethosuximide
- Disturbed neurophysiological mechanisms
- Regenerative sprouting of axons and synaptic proliferation following brain damage

# PERSONALITY IN EPILEPSY

- TLE specifically implicated
- Geschwind syndrome- hyposexuality, religiosity, compulsive writing and drawing ( hypergraphia)
- humourlessness, circumstantiality, dependence, sense of personal destiny and philosophical concerns
- Viscosity- prolonged social contacts, repetitive talking, pedantic obsessivity

# PERSONALITY IN EPILEPSY

- Studies using DSM III R- excess of dependent and avoidant personality traits/ disorders
- Explanations-



❖reactions to psychosocial consequences of unpredictable and disabling seizures

❖biological- mesolimbic lesions lead to social cohesiveness, fearfulness and avoidance

❖reactions to frightening experiences like aura

# EPILEPSY AND SEXUAL DYSFUNCTION

- Hyposexuality- more common in men than women. Upto 57% have ED.
- Psychosocial factors more important in aetiology- effects of intractable epilepsy on self-esteem, confidence. Rarely, fear of having a seizure during sex
- Organic factors- drug induced sex hormone metabolism ( Phenobarb, Phenytoin, CBZ induce hepatic enzymes and increase circulating sex hormone- binding globulin → reduced testosterone

# CRIME AND EPILEPSY

- Early views- “blind fury”
- Systematic studies- no excess of criminal records
- Violence trivial, associated with alcohol use
- 7- 8 per thousand of prisoners- not high at all
- Postictal automatisms leading to violence possible but rare
- Aggression during ictal automatisms occasionally reported.
- Most ictal or postictal aggression is resistive- as a response to confinement, restraint or delirium

# CRIME AND EPILEPSY

- Majority of criminal behaviour in epilepsy is interictal- nothing to do with seizures
- Mostly because of brain damage and cognitive impairment or psychosis
- Medicolegal implications- “automatism defense”- short duration of behaviour, apparently senseless, no attempt at concealment or escape, impairment of awareness, amnesia for the episode

# COGNITIVE FUNCTION AND EPILEPSY

- Mostly within normal range
- Cognitive deficits demonstrated in comparison with control groups- present at the time the epilepsy was diagnosed, may even precede the onset of seizures
- TLE: - Left sided- verbal episodic memory
  Right sided- nonverbal episodic memory
- JME- selective dysexecutive problems e.g. concept formation, reasoning, planning, mental flexibility and working memory

# PROGRESSIVE COGNITIVE IMPAIRMENT

- 10-20% of children have intellectual impairment manifest as progressive cognitive deficit
- Poorly controlled epilepsy
- 50% adults with poorly controlled TLE have progressive decline in memory

# CAUSES OF INTELLECTUAL IMPAIRMENT IN POORLY CONTROLLED EPILEPSY

- Cumulative effects of neuronal damage
- Brain injury due to trauma or status epilepticus
- Drug treatment
- Psychosocial impact

# DISSOCIATIVE SEIZURES

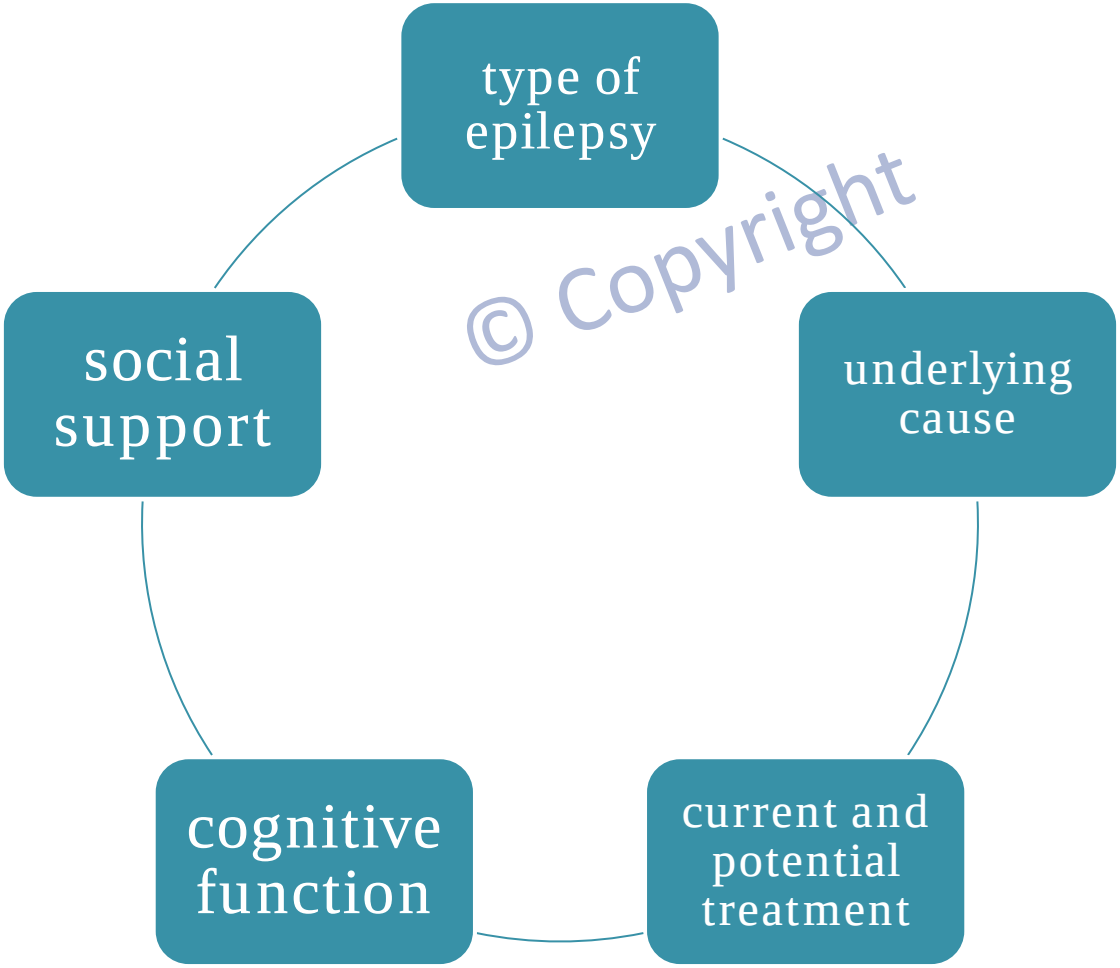
- Paroxysmal episodes of behaviour that resemble epileptic seizures and which are believed to be due to unconscious psychological processes
- Over 2/3rds female
- Onset early 20s
- Psychological trigger may not be evident clearly

# DIAGNOSIS

- On all the 5 axes of the classification system
- History-
  - Temporal relationship between seizures and psychiatric disorder
  - Treatment history
- Examination- Mental status, Neurological
- Investigations- Neurological, Psychometric

# TREATMENT

- Complex and challenging



# PSYCHOTROPIC MEDICATION IN EPILEPSY

- Potential of psychotropic drugs to exacerbate seizures-
  - Clozapine worst
  - Antidepressants- Amitriptyline, Nomifensine, Fluvoxamine, Paroxetine, Citalopram, Mirtazapine, Reboxetine safe

# TREATMENT OF ANXIETY AND DEPRESSION

- Tricyclics have a higher risk of seizure exacerbation than SSRIs, SNRIs
- Start low, go slow
- Clinically significant drug interactions-
  - ❖ Fluoxetine and sertraline increase serum phenytoin
  - ❖ Sertraline increases lamotrigine levels
- Psychotherapeutic approaches

# TREATMENT OF PSYCHOSIS

- Sulpiride, haloperidol, risperidone, trifluoperazine- low risk of seizure exacerbation
- Amisulpiride, olanzapine, quetiapine- higher risk
- Avoid depot preparations- cannot be withdrawn
- Start low, go slow
- Postictal agitation- benzodiazepines, rarely neuroleptics( should be withdrawn immediately)

# TREATMENT OF DISSOCIATIVE SEIZURES

- Explanation of diagnosis
- Reassurance
- Causes of the disorder
- Suggest that seizures improve after a correct diagnosis
- Gradual withdrawal of antiepileptic drugs
- Limited role of psychotropic medication
- Psychological treatment

# SUPPORT GROUPS

- Comprehensive care
- Team approach
- Group therapy
- Rehabilitation
- Education of caregivers
- Support to families

# THANK YOU!