Updating Psychiatric Aspects of Epilepsy

Review
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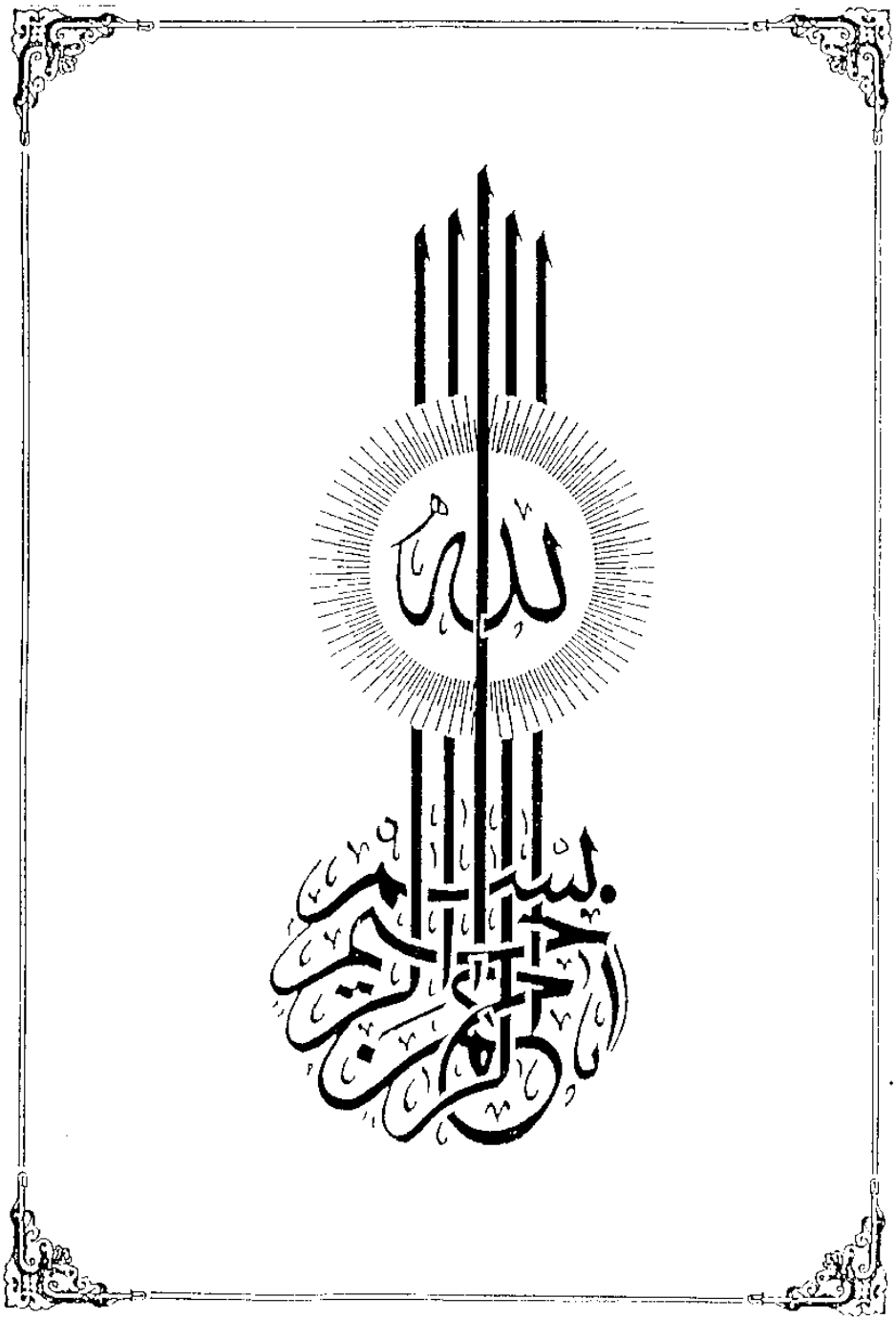

Abbreviations

AEs	Adverse effects
BZD	Benzodiazepines
CBZ	Carbamazepine
CRT	Choice reaction time.
EEG	Electroencephalogram.
ESI-55	The epilepsy surgery inventory-55.
fMRI	Functional magnetic resonance imaging.
GABA	Gamma aminobutyric acid.
GBP	Gabapentin.
GE	Generalized epilepsy.
HRQOL	Health-related quality, of life.
IAP	Intracarotid amobarbital procedure.
IGE	Idiopathic generalized epilepsy.
IQ	Intelligence quotient.
LTLE	Left temporal lobe epilepsy.
OCD	Obsessive compulsive disorder.
PET	Positron emission tomography
PHT	Phenytoin.
QOLIE	The quality of life in epilepsy.
RT	Reaction time.
RTLE	Right temporal lobe epilepsy.
SEALS	Side effects and life satisfaction scale.
SPECT	Single photon emission computed tomography.
SRT	Simple reaction time.
SSRIs	Selective serotonin reuptake inhibitors.
TCA	Tricyclic antidepressant.
TCI	Transient cognitive impairment.
TEA	Transient epileptic amnesia.
TLE	Temporal lobe epilepsy.
WAIS	Wechsler adult intelligence scale.

Contents

Introduction

INTRODUCTION

Epilepsy originates in the brain; so do our thoughts, our feelings and our behavior. Epilepsy results from changes in chemical activity at transmitter sites and in cell membranes in the brain; so does how we comprehend the world and how we react to it. Epilepsy, therefor, can change the way we think, feel and behave; but, equally, thought, emotion and behavior can change epilepsy. Epilepsy is, therefore, important to the psychiatrist, and the psychiatrist is important to epilepsy. Epilepsy lies in the borderland between what is conventionally understood as a province of neurology and what is conventionally understood as a province of psychiatry. Epilepsy and its associated phenomena cannot be understood without a firm grounding in both brain and behavioral sciences (Betts, 1993).

There is an enormous historical legacy that has no doubt shaped our own, as well as public attitudes to epilepsy. For instance the Greeks believed epilepsy to be a "sacred disease" that is the result if the invasion of the body by a god. Only a god could deprive a healthy man of his senses, throw him to the ground, convulse him and then rapidly restore him to his former self again. The relationship between epilepsy and its behavioral or mental associations has always been a matter of great interest, debate and controversy (Trimble 1988).

Mood disorders have been described as the commonest psychiatric morbidity in patients with temporal lobe epilepsy. Secondary depression in temporal lobe epilepsy could be interpreted either as an adjustment reaction to a chronic

disease or as a limbic dysfunction (Perrine et al 1996). A relationship between epilepsy and depression was described by Hippocratic "Melancholic ordinarily become epileptics and epileptics melancholic, of those two states what determines the preference is the direction the malady takes; if it bears upon the body; epilepsy, if upon the intelligence melancholy (Hopkins 1993).

Few studies have attempted to assess the prevalence of psychosis and epilepsy. Schizophrenia like psychosis may be seen in patients with epilepsy (Matsuura 1997 Mellers et al 1998). Patients with a temporal lobe seizure focus had significantly higher psychotic symptomatology than those with a non-temporal seizure focus (Manchanda et al. 1996).

Stefansson et al (1998) found that psychiatric diagnosis was present among 35% of the cases particularly schizophrenia or paranoid states.

Various factors may detrimentally affect cognition in epilepsy, including the etiology of the seizures, cerebral lesions acquired prior to onset of seizures, seizure variables, sequelae of epilepsy surgery and the untoward effects of antiepileptic drugs (Stagno1996).

Epilepsy carries many restrictions and stigmas, in childhood, epilepsy may significantly disrupt family dynamics. Parents may feel guilty about their child's illness; Siblings may be angry or jealous because of special attention paid to the "sick" child, the child with epilepsy may feel rejected, belittled, ostracized, or over-protected. In addition anti-conversant drugs may cause behavior, emotional and learning problems. Adults with epilepsy often confront restrictions in driving, employment and insurance coverage.

The marriage rate is lower in people with epilepsy, especially men, than in healthy. Dependence is another obstacle (Stagno 1996). Patients with epilepsy during childhood have retarded social growth into adulthood more often than controls appearing as a more parent based life style (Kokkonen et al 1997).

Psychiatric aspects of epilepsy and nosology:

Reviewing the nosology, it is evident that recent nosological approaches (ICD-10, DSM IV) have preferred to overlook this problem except from superficial perspectives mentioning it as a causal relation. For example DSM IV classification put epilepsy on axis III and the accompanying psychosis or psychiatric disorder on axis I (APA 1994). In ICD-10 (1992) epilepsy is put under the category of "Other mental disorders due to brain damage and dysfunction and to physical disease". A temporal relationship justifies the diagnosis.

The Egyptian Diagnostic Manual gives a separate section for " psychosis associated with epilepsy" (DMP-1,1975). This section includes the following categories: psychiatric episode with epilepsy, epileptic personality, epileptic dementia, epileptic psychosis and others.

Aim of the review:

The aim of this review is to update the understanding of psychiatric aspects of epilepsy, to help for better management of these patients and consequently improve the quality of life of these patients.

Chapter: 1

Anxiety disorders in Epilepsy

ANXIETY DISORDERS IN EPILEPSY

The relationship between anxiety and epilepsy is extremely complex: an understanding of the nature of anxiety, its role in exacerbating and complicating epilepsy and its management is necessary for anyone who cares for people with epilepsy (Betts 1993). Relatively few studies deal with anxiety disorders and epilepsy perhaps because of the difficulty in separating the normal or situational anxiety that accompanies a chronic disease from "pathologic" or "endogenous" anxiety (Stagno 1996).

Classification:

Betts (1993), suggested a classification of the relationship between anxiety and epilepsy as follows:

1. Anxiety reaction to acquiring epilepsy, which may become a chronic post-traumatic disorder.
2. Generalized anxiety related to the fear of having a seizure.
3. Anxiety reaction to the social and family stigmatization of epilepsy.
4. Prodromal anxiety.
5. Anxiety as an aura.
6. Ictal anxiety.
7. Anxiety (agitation) occurring in an epileptic psychosis.
8. Organic anxiety.
9. True phobic anxiety related to seizure.
10. Anxiety which precipitates a seizure.

11. Panic disorder or other anxiety phenomena mistaken for epilepsy.
12. Anxiety occurring as part of complex partial or non-convulsive generalized status epilepticus.

True epilepsy may start in some patients at a time of stress in their life. The stress triggers off an epileptic response in an individual with a low convulsive threshold and the epilepsy then becomes self-perpetuating, often assisted by the continuing stress of the original problem and the added stress of having epilepsy. Such epilepsy is likely to increase in frequency at times of life stresses and often will have an anxiety component contained within it (Betts 1993).

Anxiety and ictal phase:

Anxiety is a common reaction to the stress of the discovery that one has epilepsy or to family, friend's or society's reaction to the illness or as a chronic post-traumatic disorder. Anxiety can also occur as a prodromal symptom of epilepsy often for several days before an attack, a definite increase in a person's anxiety levels is apparent, culminating in a seizure (usually tonic clonic) and usually with relief of the anxiety afterwards (Betts 1993).

Ictal anxiety is the most common of the ictal feelings and it may be confined to the anterior part of the temporal lobes, either the left side or bilateral. Ictal experience can be accompanied by autonomic manifestations of anxiety like sweating, belching, vomiting, piloerection, tachycardia or, even micturation. Automatism related to the anxiety may occur, and visual hallucinations of a frightening nature may be observed. Ictal anxiety may not be recognized and may

carry a psychiatric label. Often the patient's anxiety increases the likelihood of having seizures so that, as the seizure anxiety increases so does the frequency of seizures, with each reinforcing the other. Phobic anxiety, and agoraphobia seem particularly common in people with epilepsy and relate clearly to the patient's fear of having a seizure in a crowded place or in the street (Betts 1993).

Stores, et al (1998) in a study about sleep disorders and their relationship to psychological disturbance in children with epilepsy found a significant association between seizure frequency and anxieties about sleeping.

Sometimes anxiety or *agitation* may accompany a psychosis associated with epilepsy. A particular kind of agitation can also be seen in the brain damage, often accompanied by obsessionality (or 'organic orderliness'). Sometimes, in both, the agitation can be so prominent that the underlying cause goes unrecognized. Complex partial and simple partial status and sub-convulsive generalized status may also present as an apparent generalized anxiety disorder but clouding or restriction of consciousness will usually be apparent (Betts 1993).

In addition, anxiety is one of the psychological factors that were identified as being important in the understanding of the development and maintenance of non-epileptic attack disorder (Moore & Baker1997).

Ictal fear:

Ictal fear often has an unnatural quality like fear of the supernatural, rather than being reality based. Patients with ictal fear may especially learn to associate their seizures with particular stimuli (such as music). Often this is no more than seizures occurring by chance in a particular situation, and associated with that situation by the patient who now

associates the particular stimulation with an expectation and fear that a seizure will occur, making that occurrence more likely to develop (Elwan 1990, Kaplan and Sadock 1996, and Stagno 1996).

Panic disorder and epilepsy:

Panic disorder may need to be considered in the differential diagnosis for patients who complain of "spells". It can be sometimes difficult to distinguish from epilepsy itself. Panic disorder may coexist with epilepsy and be a significant source of distress or disability. It may go unrecognized because physicians are using to attribute all of a patient's symptoms to a single disease, complicating seizure management and the patient's life (Spitz, 1991, Betts 1993, and Tisher et al, 1993). Lee et al (1997) reported a case of an adolescent female who presented with panic disorder with agoraphobia which was a consequence of seizure activity. The author stated that seizure disorders could produce anxiety that is almost indistinguishable from psychiatric disorders. Genton et al (1995) described panic attacks as a frequent type of **pseudoepileptic** seizures, that occur more frequently in epilepsy patients, leading to pseudosevere epilepsy. The author evaluated 4 patients with a past history of epileptic seizures long in remission who were misdiagnosed as having relapsing seizures although they had fairly typical panic attacks.

An aura of anxiety or fearfulness (ictal fear) may be confused with panic attacks. Some authors have claimed that patients with ictal fear exhibit more psychopathologic symptoms than other patients with complex partial seizure, but this association has been refuted. Studies have reported evidence, demonstrated by positron emission tomography

(PET) and magnetic resonance imaging, suggesting that the lesion in panic disorder may be in the temporal lobes. The findings support to the idea that these illnesses may be related (stagno 1996). Numerous case reports (such as Wall et al 1985, and Drutbach and Kelly 1989) described panic attacks as a symptom associated with clear-cut pathologic central nervous system disorders.

People with epilepsy may develop significant avoidance either because of concern about embarrassing behaviors during seizures (vocalizations, loss of bowel or bladder control, undressing, or other automatisms) or because of inability to function well as a result of confusion or other postictal behaviors. A near-agoraphobic condition may follow and be a major contributor to disability. Treatment of this complication should favor behavior or educational training over the use of psychotropic medications, unless the anxiety is disabling or overwhelming (Stagno 1996).

Obsessionality and epilepsy:

Obsessionality has been attributed to patients with temporal lobe epilepsy, as have compulsions, particularly writing. No clear evidence to date indicates that OCD is significantly more prevalent in people with epilepsy than in healthy individuals, although case reports of an association exist. Tourette's syndrome, postencephalitic Parkinson's disease, and Sydenham's chorea may overlap with OCD, however, studies show that organic factors influence its pathophysiology. Epidemiologic research reveals that OCD is more common than previously recognized, with a lifetime prevalence rate of approximately 2.5%. Patients with OCD tend to be reluctant to reveal their symptoms, and therefore, co-morbid OCD may not be recognized. The pathophysiologic factors in the two disorders, such as limbic system