Psychiatric Aspects of Paediatric Epilepsy

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Epilepsy is the most common neurological disorder in children with a prevalence of 0.05 -1%7. Epilepsy itself is a disease of the central nervous system but is also a chronic medical illness. It carries risks of developing emotional, behavioural or mental problems. Studies showed that there is an increased risk of having psychiatric symptoms in patients with epilepsy compared with normal controls5. More than 20% of the young population with uncomplicated epilepsy may have some form of psychiatric problem compared with 10% in those who suffer from chronic medical illness. However, more than 50% of children and adolescents with complicated epilepsy may have psychiatric involvement3. Among all types of psychiatric illness, anxiety and depression are the most commonly reported psychiatric problem followed by attention deficit and hyperactivity disorder, obsessive compulsive disorder and tics disorder. Patients with epilepsy have higher risk of suicide and deliberate self-harm than general population9.

Despite the high prevalence of psychiatric illness among epileptic patients, only a small proportion of them receive formal psychiatric treatment due to various reasons including the social stigma on psychiatric illness and epilepsy5. A study by Caplan showed that only one third of the child and adolescent epileptic patients presented with mood symptoms received psychiatric services9. This unrecognised and underestimated situation can lead to adverse psychiatric consequences and outcomes in epileptic patients.

The psychiatric symptoms of epileptic patients could be either directly related to the seizure activity (ictal) or with no direct relationship with the seizure (inter-ictal). Mood symptoms may occur in the form of non-specific vague mood changes or a sense of unease during the prodromal period. There could be acute perceptual, mood or behavioural changes during the aura. The nature of the aura could indicate the site of the seizure focus. In patients with temporal lobe epilepsy, they could have rising epigastric aura, déjà vu, derealisation, oro-alimentary and gestural automatisms, auditory and visual illusions. In patients with frontal lobe epilepsy, they could have motor automatism in the form of fencing posture, speech arrest, bizarre vocalisation or bilateral coordinated limb movements. Patients with parietal lobe focus could have sensory aura in the form of tingling or numbness. Fleeting visual phenomena could occur in patients with occipital lobe epilepsy. In the ictal period, fear is the most common psychiatric presentation. During the inter-ictal period, patients may have depressed or altered mood. They worry of having further attacks and fear of the uncertainty of both the frequency and severity of the attacks. They may have a lowered self-esteem and confidence, social mal-adjustment and restricted social relationship or even social isolation.

Patients with temporal lobe epilepsy have a higher risk of having psychoses, particularly those with more severe and medically intractable symptoms and with left-sided focus7.

The aetiology of psychopathology in epileptic patients could be multifactorial in nature including biological, social and psychological. Biologically, it could be directly related to the pathology in the central nervous system. Risk factors include the age of onset, location of the foci, the nature and the severity of the seizure. Studies found that depressive disorder was more common in patients with complex partial seizures particularly with left-sided temporal lobe foci8. Social factors include the family adaption to the illness, over-controlling parenting style, parent-child relationship, the social support of the patient, and the stigma of the general public. Studies found that the lack of knowledge about epilepsy led to distortion and misconception on this illness and heightened the stigma about this disorder9. The restriction of normal social activities from the over-protective parents after the diagnosis of epilepsy may greatly affect their social life and associated with higher levels of behavioural problem10. Psychological factors included the coping and the attitude of the patients towards the illness. They may have a sense of having no control over seizures and resentment of a loss of independence seen in the need to take medication for the rest of their life.

The diagnosis of psychiatric disorder in children and adolescents is similar to that of adults. However, they could have atypical presentation that made diagnosis difficult. In depressed epileptic patients, they could have deterioration in academic performance, school refusal, separation anxiety, agitation and regressive behaviour instead of typical depressive features of depressed mood, loss of interest, psychomotor retardation and suicidal ideation.

Treatment of depression in child or adolescent epileptic patients is similar to that of adults. Cognitive behavioural treatment and pharmacological treatment are the mainstay of treatment. Tri-cyclic antidepressants failed to show efficacy in the treatment of child and adolescent depressive disorders. The first-line treatment...
should be the selective serotonin reuptake inhibitor (SSRI). Fluoxetine showed more favourable results in the treatment of child and adolescent depressive disorders among all SSRIs followed by citalopram and sertraline. However, we should be aware of the drug-drug interaction between psychotropic and antiepileptic medications particularly antidepressants that inhibit cytochrome P-450 isoenzymes for which antiepileptic medications are substrates. SSRIs like fluoxetine, sertraline, paroxetine inhibit the metabolism of phenytoin, carbamazepine and phenobarbital and can increase the risk of toxicity. Among all SSRIs, citalopram shows no interaction with antiepileptic medications and is preferred for the treatment of depressive disorders in epilepsy\textsuperscript{11}. Studies indicated that there is an increased in suicidal risk in the use of selective serotonin reuptake inhibitor in child and adolescent population particular in the early stage of treatment. Close monitoring on their mental condition especially in the early stage of treatment is necessary to look for any development of suicidal ideation or behaviour\textsuperscript{12}.

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References