



EPILEPSY IN CHILDHOOD: CHALLENGES AND CARE

Ms. Aronica* | Dr. Jiwanpreet Kaur**

*Research Scholar, Himalayan University, Itanagar, Arunachal Pradesh, India.

**Research Supervisor, Himalayan University, Itanagar, Arunachal Pradesh, India.

<https://doi.org/10.47211/idcij.2025.v12i04.011>

ABSTRACT

Epilepsy is one of the most common neurological disorders affecting children, particularly during their formative years. The condition is characterized by recurrent, unprovoked seizures resulting from abnormal electrical discharges in the brain. Seizures may manifest as altered consciousness, involuntary movements, sensory disturbances, autonomic changes, and behavioural alterations. The global incidence of epilepsy is higher in developing countries, including India, compared to developed nations.

Educational performance in children with epilepsy is often affected not only by seizures and antiepileptic medications but also by societal attitudes, parental overprotection, and inadequate awareness among teachers and peers. Proper education about seizure types, first-aid management, and supportive school environments can significantly improve academic and psychosocial outcomes.

Epilepsy syndromes are classified by the International League Against Epilepsy (ILAE) into genetic, structural/metabolic, and unknown categories. Diagnosis involves neurological examination, blood tests, and sometimes genetic testing. Management primarily includes antiepileptic medications, with approximately 70% of children responding to first-line therapy. In refractory cases, options such as ketogenic diet, vagal nerve stimulation, or surgery may be considered. Timely pharmacological intervention, especially in status epilepticus, is crucial to prevent neurological damage.

Improving awareness, early diagnosis, effective treatment, and fostering empathy within schools and communities are essential to enhance the quality of life and academic potential of children with epilepsy.

Key Words: Diagnosis, Epilepsy, neurological disorders, School children.

ABOUT AUTHORS



Ms. Aronica is a Research Scholar at Himalayan University in Itanagar, Arunachal Pradesh, India. Her academic work is centered on advanced research within her specialized field of study.



Dr. Jiwanpreet Kaur is a Research Supervisor at Himalayan University in Itanagar, Arunachal Pradesh, India. She is a dedicated academic who has contributed significantly to her field through presentations at numerous national and international conferences.



INTRODUCTION

Epilepsy is a common neurological condition in children. As it hits the most important formative years of the majority of the patients, education does get hampered, especially when parents are overprotective and teachers are either non-supportive or neutral with negative attitudes. What is needed is awareness and proper education about different types of seizures, dos and don'ts during an attack on the teachers. Once teachers accept and have empathy for them, peers would automatically accept them. The cordial ambiance is bound to stimulate these children to study despite the limitations due to seizures and antiepileptic drugs. They may not be the best but they must be encouraged to be their best. (Singhal BS, Devika Nag, 2002)

Epilepsy has been outlined as "a neurologic condition characterised by recurrent, unprovoked, and paroxysmal episodes of brain dysfunction manifesting as an outsized number of clinical phenomena like altered levels of consciousness, involuntary movements, abnormal sensory phenomena, autonomic changes and transient disturbance of behaviour. It is also referred as the seizure disorder. Seizures are the most common pediatric neurologic disorder from very birth to adolescents is seen to be problematic almost throughout the life. The convulsion occurs due to disturbances of the brain functions resulting from abnormal excessive electrical discharge from the brain [Marilyn J, Hockenberry. 2009.].

It is natural for parents to have concerns, especially about a child's safety. It is said that how the parents handle epilepsy determines how their child will handle it. If epilepsy is treated as a temporary inconvenience by parents, then it becomes a discouragement for the child. Address any feelings, questions, and concerns straightforwardly is an important aspect of managing epilepsy. Staying well-informed and encouraging the child will help build the confidence needed to face the outside world and enable them to reach their full potential. [http://www.allsands.com/kids/health/epilepsychild_swy_gn.html]

WHO stated that developed countries suggest an annual incidence of convulsion, of approximately 50 per 1,00,000 of the general population. Developing countries suggest that this figure is nearly double that at 100 per 1,00,000 population. To these findings, developing countries like India are prone to convulsive disorders. (World Health Organisation. 2008.)

Classification of Epilepsy Syndromes

The classification as proposed by ILAE has recently been modified. New concepts and terminology have been introduced based on the current understanding. Previous classifications of "idiopathic," "symptomatic" and "cryptogenic" have been replaced by "genetic," "structural/metabolic" and "unknown," respectively. This indirectly places a large emphasis on the availability of facilities such as neuroimaging, genetic studies, etc. It is no surprise, therefore, that there are very few studies that look at the application of ILAE classification in the Indian subcontinent. A paediatric study from Mumbai (using 1981/1989 classification) reported 55.3% partial, 27% generalized, 13.5% undetermined, and 4.1% specific epilepsy syndromes.

Epilepsy is one of the most common neurologic disorders of childhood. However, in Thailand, as well as in most of other developing countries, little attention has been paid to improving the public knowledge regarding epilepsy. Currently, public attitude toward epilepsy is rather negative, full of prejudices and bias. Children with epilepsy in Thailand still find themselves confronted with social barriers that prevent them from academic achievements, in addition to the limitations that the disease itself has already placed on them.

SIGNS AND SYMPTOMS

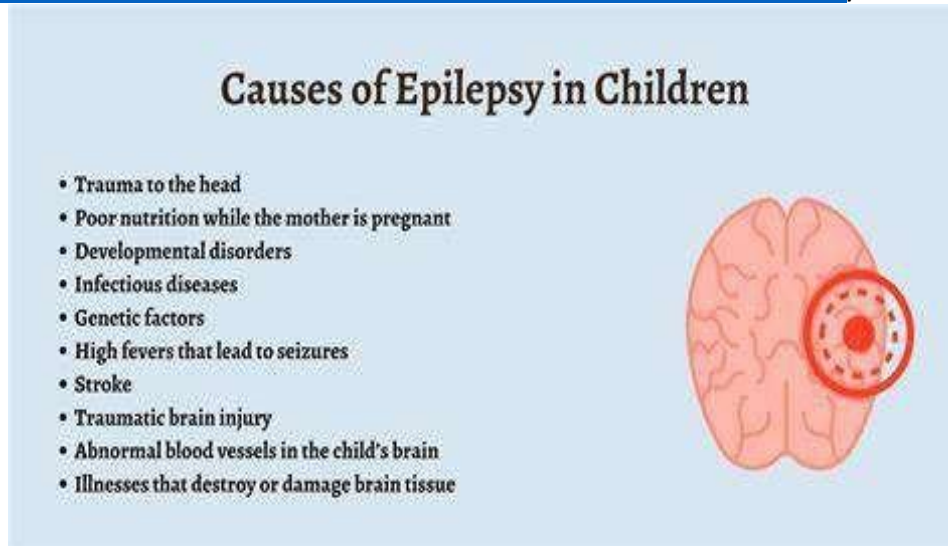
Characteristics of seizures vary and depend on where in the brain the disturbance first starts, and how far it spreads. Temporary symptoms occur, such as loss of awareness or consciousness, and disturbances of movement, sensation (including vision, hearing and taste), mood, or other cognitive functions.

People with epilepsy tend to have more physical problems (such as fractures and bruising from injuries related to seizures), as well as higher rates of psychological conditions, including anxiety and depression. Similarly, the risk of premature death in people with epilepsy is up to three times higher than in the general population, with the highest rates of premature mortality found in low- and middle-income countries and in rural areas.

A great proportion of the causes of death related to epilepsy, especially in low- and middle-income countries, are potentially preventable, such as falls, drowning, burns and prolonged seizures. (<https://www.who.int/news-room/fact-sheets/detail/epilepsy>)

CAUSES OF EPILEPSY

Seizure triggers do not cause epilepsy but can provoke seizures in those who are susceptible. For those who are already diagnosed with epilepsy and taking medication, triggers can spark a seizure. (<https://www.ninds.nih.gov/health-information/disorders/epilepsy-and-seizures>)



Triggers include:

- Stress
- Drinking alcohol, or alcohol withdrawal
- Dehydration or missing meals
- Exposure to toxins or poisons, including lead, carbon monoxide, illicit drugs, and very large doses of prescription medications
- Hormonal changes associated with the menstrual cycle
- Sleep deprivation
- Visual stimulation such as flashing lights or moving patterns

DIAGNOSIS

To diagnose epilepsy, your healthcare professional reviews your symptoms and medical history. You may have several tests to diagnose epilepsy and to detect the cause of seizures.

(<https://www.mayoclinic.org/diseases-conditions/epilepsy/diagnosis-treatment/drc-20350098>)

They may include:

- **A neurological exam.** This exam tests your behavior, movements, mental function and other areas. The exam helps diagnose epilepsy and determine the type of epilepsy you may have.
- **Blood tests.** A blood sample can detect signs of infections, genetic conditions or other conditions that may be associated with seizures.
- **Genetic testing.** In some people with epilepsy, genetic testing may give more information about the condition and how to treat it. Genetic testing is most often performed in children but also may be helpful in some adults with epilepsy.

How is pediatric epilepsy treated?

(<https://www.yalemedicine.org/conditions/pediatric-epilepsy/>)

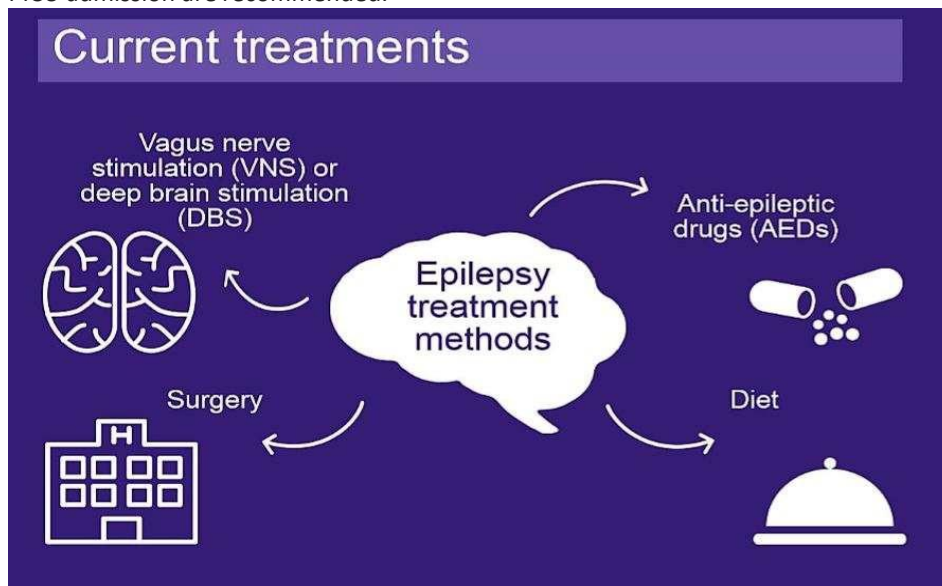
“There are many anticonvulsant medications available,” Dr. Bamford says of the medicines, which are through to prevent the spreading of the abnormal brain activity that leads to seizures. “Most children tolerate these medicines well, without side effects. If side effects occur, other medications can be tried, as there are many available options to choose from.”

About 70 percent of children who have epilepsy will respond to the first medication and first dosing regimen they are given, Dr. Bamford says. A further 20 percent of kids will respond to a second medication or a change in dose, he adds.

The remaining 10 percent of children, who have seizures that are difficult to control, will require several medications and/or will be evaluated for other types of treatment, Dr. Bamford says. Options for additional treatment can include a ketogenic diet, a vagal nerve stimulator or epilepsy surgery

The most important thing in pharmacological treatment is rapid implementation of a clear protocol, adjusting doses to the weight of the patient. Therefore, in the case of refractory SE the treatment should be as fast as possible. The 2017 ILAE recommendations relate pharmacological treatment to time. So three time- points are described here:

- T1 is the period in which the emergency treatment of SE should be started.
- T2 is the period after which seizures could result in neural cell death, modifications in neural networks, and functional deficiency.
- T3 is characterized by refractory SE: SE continues despite the treatment. In this case, hospitalization and PICU admission are recommended.



CONCLUSION

Epilepsy in children is a manageable neurological disorder when identified early and treated appropriately. While medical management plays a central role, social support from parents, teachers, and peers is equally important. Increased awareness and positive attitudes can reduce stigma, improve academic participation, and enhance overall well-being. With proper treatment, timely intervention, and a supportive environment, children with epilepsy can lead productive and fulfilling lives, striving to achieve their personal best despite challenges.

REFERENCES

1. AllSands. (n.d.). *Epilepsy in children*. http://www.allsands.com/kids/health/epilepsychild_swy_gn.html
2. Hockenberry, M. J. (2009). *Wong's nursing care of infants and children* (7th ed.). Elsevier.
3. Mayo Clinic. *Epilepsy: Diagnosis and treatment*. <https://www.mayoclinic.org/diseases-conditions/epilepsy/diagnosis-treatment/drc-20350098>
4. National Institute of Neurological Disorders and Stroke. (n.d.). *Epilepsy and seizures*. <https://www.ninds.nih.gov/health-information/disorders/epilepsy-and-seizures>
5. Singhal, B. S., & Nag, D. (2002). *Epilepsy in India*. Indian Epilepsy Association.
6. Trinka, E., & Kälviäinen, R. (2017). 25 years of advances in the definition, classification and treatment of status epilepticus. *Seizure*, 44, 65–73. <https://doi.org/10.1016/j.seizure.2016.11.001>
7. World Health Organization. (n.d.). *Epilepsy*. <https://www.who.int/news-room/fact-sheets/detail/epilepsy>
8. World Health Organization. (2008). Epilepsy—Defogging the demon. *India Together*, 36.
9. Yale Medicine. (n.d.). *Pediatric epilepsy*. <https://www.yalemedicine.org/conditions/pediatric-epilepsy>