## Lepilepsy India



Newsletter of the Indian Epilepsy Association & Indian Epilepsy Society



Joseph von Mering



Emil Fisher



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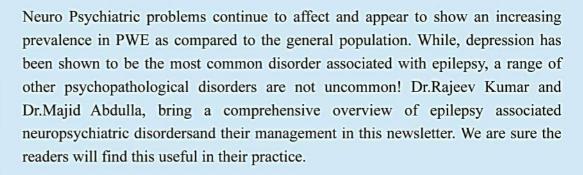
## Editorial...



Dr. Bindu Menon

We the editorial team bring you the 1<sup>st</sup> Issue of Epilepsy India for 2019, and wish all our readers a very happy, healthy and prosperous New Year.

The cover page in this issue features and introduces two great German chemists, Emil Fisher and Joseph von Mering who created history through their discovery of the first novel anti-epileptic drug - barbiturate. Even to date phenobarbital continues to have a place in Pharmacotherapy of epilepsy in LMICs and is included in the list of essential drugs by WHO.



The various epilepsy chapters across India are conducting several programs and activities to create awareness and drive away the stigma/myths/misconceptions associated with epilepsy among the PWE as well as public. The numbers seem to have increased in the recent past, so much so we the editors at times find it difficult to accommodate! However, it is truly enlightening to see the increase in number of reports that we receive. Well done!

The 20th Joint Annual Conference of Indian Epilepsy Association (IEA) and Indian Epilepsy Society (IES) is fast approaching in the capital city - New Delhi. Don't Miss out an incredible opportunity to listen what the national and international experts have to share about the latest scientific advancements in the field of epilepsy.

Do join the three days of learning from this scientific feast!

Looking forward to meeting you all at Delhi!



Dr. Sita Jayalakshmi



Dr. Chanda Kulkarni

#### EPILEPSY- ASSOCIATED NEUROPSYCHIATRIC DISORDERS



Dr.RAJEEV KUMAR Senior consultant in liaison psychiatry, Hamad Medical Corporation, Doha, Qatar

Dr.MAJID AL ABDULLA Psychiatry department,



Epilepsy is a serious and disabling neurological disorder with several neuropsychiatric consequences. A range of neuropsychiatric disorders has been well delineated in people with epilepsy (PWE). Most importantly, PWE are at a significantly higher risk of having a poor quality of life and psychosocial functioning. Although the association between epilepsy and psychiatric disorders has been clearly established, the literature supports the evidence that the association has been overestimated. This might be partly due to the methodological complexity of studying these two disorders and particularly due to several confounders. It becomes even more problematic to determine the exact etiology as there are several interacting factors such as the type, severity, and frequency of epilepsy or effect of anticonvulsant medications. An intriguing proposal in some cases at least is that the psychiatric and neurocognitive effect in epilepsy might be explained by a shared pathophysiology. However, whatever be the etiology, it is clear that the best treatment outcome for PWE can be achieved only if clinicians take care of both the neurological and psychosocial care of these patients. In the following sections, we discuss three important aspects – cognitive impairment, mood and anxiety disorders, and psychosis.

#### Cognitive impairment in epilepsy

Identification of alteration in sensorium along with acute onset of cognitive impairment is important in the neuropsychiatric assessment. Several peri-ictal presentations especially status epilepticus and post-ictal delirium should be considered if the onset is acute and sensorium is altered. On the other hand, the non-acute cognitive impairment could be explained in terms of a common psychopathology or antiepileptic treatment effect (i.e. from medication or surgery.) However, in most cases, the relationship is complex, multifactorial, and often depression is a confounder. A number of neurological disorders such as tumors, stroke, infections, and various dementias can have seizures as a part of the presentation and the resulting cognitive impairment might be due to the neuronal disconnection. In primary epilepsy, the various impaired cognitive domains include processing speed, reaction and response time, language, memory, and attention. Among all the epilepsies, the most extensively studied type has been complex partial seizures with significant cognitive impairment, especially impairment in episodic memory. As hippocampus and related structures in the formation are relevant to memory, damage to these structures might be the reason for such dysfunction, as evidenced in hippocampal sclerosis or temporal lobectomy. Impaired frontal executive functions have been reported in people with frontal lobe epilepsy.

The role of antiepileptic drugs (AEDs) concerning cognitive impairment, particularly in the elderly has been of interest. This might be partly due to the sedative effect of some AEDs or due to polypharmacy. There has been a suggestion that topiramate is more likely to cause impaired cognition compared to lamotrigine or gabapentin.

In terms of treatment, the most important approach should be optimizing the control of seizures with AEDs that are well tolerated and with better side effect profile. Of note, the clinician should avoid irrational polypharmacy. Other treatable causes are depression and insomnia. If there are structural damage to the brain areas, it should be recognized and use as a prognostic marker.

#### Mood and anxiety disorders in epilepsy

Mood and anxiety disorders are a common in PWE. A landmark population- based study from Canada estimated a prevalence of 0.6 % of epilepsy and in that cohort, the life time prevalence of depression was 17.4% compared to 10.7% in the general population. Most importantly, in that study, the lifetime prevalence of suicidal ideation was significantly higher than the general population (25% vs. 13.3%). This is important as it might reflect the higher mortality in PWE. These findings have implication in setting up the right service for PWE, as mental health component should always be incorporated. Similar data have been replicated by several studies globally. In India, large epidemiological studies are lacking to understand the nature, prevalence, and impact of epilepsy and psychiatric disorders. Nonetheless, several researchers in India conducted clinical or hospital- based studies with a reported prevalence of depression ranging from 15% to 65% with an estimated average of 40%. The overall data suggests that epilepsy and associated psychiatric comorbidity have relevance to both high-income and low- and middle-income countries, with almost 80% of PWE live in low- and middle-income countries.

Depression in epilepsy is due to several causes. Therefore, a detailed psychiatric assessment and formulation are needed for delivering individualized treatment. It is not uncommon for some clinicians to consider the depression in epilepsy as an understandable reaction. While it may be the case in some people, the psychiatric clinical experience has been that in majority of cases the depression is clinically significant with patient and family suffering and better treatment outcome can only be achieved by effective treatments such as antidepressants and/or psychotherapy. Of note, a distinct type of depression known as inter-ictal dysphoric disorder has been described with clinical features characterized by irritability, low mood, anergia, insomnia, aches and pains, fear, anxiety, and euphoria. It has been highly recommended for neurologists and general practitioners to use screening questionnaires and one that is well-validated for PWE is Neurological Disorders Depression Inventory (NDDI-E), a 6-item self-reported questionnaire. In psychiatric assessment, the clinician should explore the full bio-psycho-social etiological aspects. Neurologists can manage many cases of mild to moderate depression, as in many such cases good support, better control of seizures, and use of a single antidepressant medication are all that required. A referral to a psychiatrist should be considered in moderate to severe cases where depression is associated with psychotic features, suicidal patients, nonresponders, and patients who might require combination of antidepressants and antipsychotics. An important consideration when prescribing psychotropics is the issue of drug interaction of antidepressants with antiepileptic drugs. Hepatic enzyme inducers such as carbamazepine, phenytoin, and phenobarbital can reduce the blood level of antidepressants. A detailed discussion of this topic is beyond the scope of this report. The general consensus is that SSRI and SNRI antidepressants are safe as first line agents, provided there are no absolute contraindications. The traditional tricyclic antidepressants such as amitriptyline should be avoided as the first line agents due to their anticholinergic side effects. As epilepsy is a chronic condition for many patients, general supportive counselling and specific therapies such as CBT should be considered.

Data on anxiety disorders are limited due to several confounding factors including physician perception, comorbid depression, and periictal issues. However, PWE report anxiety symptoms twice than those without epilepsy. It has been estimated that an anxiety disorder occurs in 25% of PWE, which is distinct from the ictal fear. Both generalized anxiety with social phobia and panic attacks have been described.

#### Psychosis in epilepsy

A clear association has been established between epilepsy and psychosis, in particular schizophrenia-like psychosis. A clinically useful approach is to look at the temporal relation between the onset of psychosis and the last seizure episode. In this regard, it has been classified as ictal, post-ictal and inter-ictal psychosis. The classical symptoms of psychosis are delusions, hallucinations, disorganized thinking and behavior, and catatonia. Psychosis that occurs in the absence of altered sensorium is typically present in interictal psychosis. The onset is not associated at the time or soon after the last seizure episode. The duration can be acute, brief, transient, or chronic and may be related to forced normalization. People with complex partial seizures are more likely to develop interictal psychosis compared with generalized tonic clonic type. Further, AEDs and refractory epilepsies are additional risk factors.

Postictal psychosis typically occurs soon after or within 1 week of the seizure episode. The duration of psychosis usually is 15 hours but rarely lasts beyond two months. And, it should not be due to AEDs toxicity, head trauma, nonconvulsive status epilepticus or other neurological or psychiatric disorders.

In the preictal and ictal states, several psychomotor and psychiatric phenomena could occur, particularly in auras and automatisms. Of particular importance is the intense fear and panic with crying, laughing, intense sexual feelings etc. that should not be confused with psychosis.

An overall prevalence of 5.6% of psychotic symptoms has been reported in PWE. The risk factors include severe and frequent episodes of seizures, history of status epilepsy, treatment resistance, and temporal lobe focus with hippocampal sclerosis. Other risk factors that may need consideration include AEDs, forced normalization or alternating psychosis.

Treatment with antipsychotics is indicated in cases where psychotic symptoms significantly impair the functioning of PWE. An individualized approach is needed about how long patients should be treated with antipsychotics. An important consideration is to select the right antipsychotic medication, as many of these agents can reduce the seizure threshold. Clozapine, olanzapine, and quetiapine are more likely to be reduce the seizure threshold compared to risperidone, ziprasidone, or aripiprazole. Additionally, several antipsychotic medications interact with AEDs and for all the above reasons, neuropsychiatric consultations should be sought.

In summary, a multidisciplinary team approach involving neurologists, psychiatrists with a special interest in epilepsy, psychologists, occupational therapists, and social workers is ideal for the comprehensive management of PWE. As reviewed above, a range of neuropsychiatric disorders occur in PWE and the assessment and interventions should include a bio-psycho-social approach.

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## 15th Indian Epilepsy Society National EEG workshop and Masterclass in Epilepsy surgery Reported By: Dr. Manjari Tripathi

The venue for the same was the Banaras Hindu University. The workshop was inaugurated by the Vice Chancellor BHU, Dean had an attendence of 190 delegates. The 3 day workshop dwelled with various aspects of EEG having clinical implications. Drs Deepika Joshi, VN Mishra, Abhishek Pathak, Abhay were local hosts, Drs Sanjjev Thomas, Manjari Tripathi, Sitajayalaxmi, Ashalatha Radhakrishnan, Sangeeta Ravat, Ajay Garg, Ashok Jarayal, Madhavi Dave, Jyotirmoy Banerjee, Aparna Dixit represented the society. Dr John Stern (UCLA-USA), Chistopher Skidmore, Ashwini Sharan (Thomas Jefferson) were the invited international faculty. There was interaction and group discussions which the participants appreciated. A quiz with prizes was organised at the end of the workshop. Neurologists, physiology and basic researchers participated actively in the same.





Epilepsy India - January-March 2019

#### SHIVAMOGGA

Reported By: Dr.A.SHIVARAMAKRISHNA

National Epilepsy Day was celebrated on 24th & 25th of November, 2018 by IEA, Shivamogga branch. The following activities were organized on the occassion.





24-11-2018 (Saturday) Street Play on Epilepsy was enacted at Govt, high school-Durgigudi, Sarvodaya girl's PU college, and at Private bus-stand. The drama was enacted by Mr. Venkatesh and team from IEA, Bangalore branch.

25-11-2018 (Sunday) The program was conducted for patients with Epilepsy and the public. The following were the activities conducted. Sports for patients with Epilepsy and skit on "Epilepsy-women" by Mr. Venkatesh and team was conducted. Dr.G.T.Subhash, President, IEA and Dr.P.K.Pai President, IMA, Shivamogga were chief guests. They spoke on Epilepsy and appraised patients and their relatives to remove fear and dispel their misconcepts about Epilepsy. Free checkup and drug distribution to patients was done. Prizes were distributed to patients for the winners of sports competition.

On the occasion of NED, an essay competition was held for the public. The theme was " Epilepsy-Psycho-social aspects". There were 22 entries and the best four were awarded prizes.

All these activities were organized by IEA, Shivamogga branch in association with IEA, Bangalore and IMA, Shivamogga branch.

#### **BANGALORE**

#### Reported By: Dr. CHANDA KULKARNI

#### Dr. ChandaKulkarni seen with Nursing Students, at Patel Groups of Institutions 28th December 2018





Dr Chanda Kulkarni, EC Member IEA-Blr Chapter & member of editorial team of Epilepsy India, was invited to deliver an educational Epilepsy awareness program for nursing students, at Patel Group of Institutions which included nursing students from - Holy Mother Institutions, Mother Theresa School of Nursing, Federal College of Nursing and Gangothri School of Nursing. There were around 300 IV/III yr BSc & II/III yr Nursing students & staff who attended the lecture with great enthusiasm.

The lectures covered – basic definitions of epilepsy, the burden of persons with epilepsy in India and around the world, common causes of epilepsy, and varioustreatmentoptions available for persons with epilepsy, the frequently encountered emergencies, and special precautions to be taken and role of a nurse in managing epilepsy. The Dos' & Don'ts including 'first aid' offered during an attack of epilepsy.

The lecture topic covered basic information and the students had many interesting questions regarding precautions to be taken by women and children with epilepsy, the impact of epilepsy on driving etc.

The various diagnostic techniques/equipments that would help in diagnosing epilepsy, the importance of medications available and monitoring, surgical treatment, Vagus Nerve Stimulation [VNS] including 'ketogenic' diet in controlling seizures.

Students were given chance to answer FAQs and the first aid to be offered during an episode of seizure when they witness, along with the reasons as well as importance of such measures taken. The need for educating a person with epilepsy and their family members/care takers was explained. How anti-epileptic medications help and why adherence to them needs to be emphasized including common adverse reactions to anti- epileptic medications were briefed.

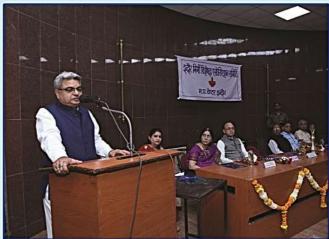
The recap on FAQs was assessed at the end of presentation as responses. The session was highly interactive and participatory.

#### **INDORE**

Reported By: Dr.V.V.NADKARNI

Epilepsy Seminar Organized by Indore Epilepsy Visheshagya Association Samiti Indore Chapter on 17th Nov.2018





Indore Epilepsy Visheshagya Association Samiti (IEVAS) conducted seminar on Epilepsy at Jall Sabhagraha on 17th November 2018

Honorable Justice Shri Rohit Arya M.P. High Court, Indore Bench was the chief guest of the function. He inaugurated the function. Trustee of Gita Bhawan Hospital Shri Ramvilas Rathi presided the function.

Dr. V.G. Dakwale President of IEVAS Indore Chapter spoke on "Epilepsy Surgery progress" Dr. Nadkarni Secretary of IEVAS Indore. Chapter gave the detail report on activities conducted from Nov.2017-Oct 2018

Shri Ramvilas Rathi presided the function & reassured for continuous support for the chapter.

Chief Guest High Court Justice Shri Rohit Arya remarked - "India is a Unique where there is Unity in Diversity hence we should be proud to be Indians. Epilepsy patients have full right to live independently with good quality of life .Patient should develop will power, self esteem, However our society needs to adopt positive attitude towards epilepsy and give equal opportunity for patient with epilepsy for work, education and marriage. He quoted example about a married couple, where the woman had epilepsy, which was disclosed after marriage and in-laws wanted to file divorce, however after his counseling the in-laws and their son that epilepsy is treatable and she can live normal life with treatment. He also educated them that epilepsy is not a stigma and can be controlled with medicines and they accepted judgment and divorce was avoided. He also remarked that while such legal cases are rare it is important to inform that epilepsy is an eminently treatable disorder. Shri Rohit Arya released a annual newsletter of Indore Chapter. Dr.R.K.Gaur Medical Director Gita Bhawan Hospital Indore gave vote of thanks.

In a workshop 90 Homeopathic Doctors actively participated. Dr.Varun Kataria Neurologist Medanta Super specialist Hospital Indore addressed on "Epilepsy management in adults", followed by

question/answer session related to diagnostic dilemmas and therapeutic options of refractory epilepsy. **Dr. Rashmi Shrivastav**, Dietician spoke on "Approach to Epilepsy Management through Ketogenic diet and emphasized on normal well balanced diet for patient with well controlled epilepsy.

Dr Jaymala Shah demonstrated YOGA to audience and to PWE who are practicing yoga on daily basis.

The program was followed by cultural program with dance performed by PWE - Mr. Pankaj Parmar. A poster exhibition on epilepsy was organized at the venue to create awareness on different aspects of epilepsy. A painting competition was organized to encourage creativity among children suffering from epilepsy and was appreciated. 15 children participated and were awarded with prizes. In a quiz competition for patients and caregiver was attended by 65 adults. All the members & caregivers of PWE received handouts on epilepsy. A free epilepsy camp was conducted for diagnosis & treatment in which 65 patients were examined by neurologists and free anti epileptic drugs were distributed to all the patients with help from - Neelam Ranade, Pradeep Maheshwari, Jaymala Shah and Anita Motwani, Priyanka Goutam.

#### CONFERENCE ANNOUNCEMENT







### 20<sup>th</sup> Joint Annual Conference of Indian Epilepsy Society and Indian Epilepsy Association

Pre Conference Workshop: 8th March 2019 (Theme: "Pertinent Investigations in Epilepsy")

Main Conference: 9th - 10th March 2019 (Theme: "Seizures the tip of the iceberg")

March 8 - 10, 2019 (Friday thru Sunday), Eros Hotel, Nehru Place, New Delhi, India

### For further details visit: www.econ2019.org

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#### **KOCHI**

Reported By: Dr.VINAYAN KP

IEA Kochi launches "Helping Hands "- The direct financial assistance scheme for flood victims with epilepsy





In August 2018, Kerala was devastated by floods the likes of which have not been seen in the past 94 years. Though the state experiences heavy rainfall and the Malayalees are used to battling the rains every year, this year the rains took everyone by surprise. All the 96 dams in the state were full by mid-August and dam shutters had to be opened in most of them on August 16th, putting the already inundated state in danger of completely drowning. The administration did its very best but was hampered by the vastness of the task before it and the common people, especially the youngsters, came out in huge numbers to help rescue and move victims to shelters and thereafter to help rehabilitate the victims. It is a huge and onerous task, one which is by no means over. People have lost their houses and belongings and in many cases their means of livelihood. Their life's savings have been washed away and they need both monetary and material help to get on their feet again. Many organizations came forward to help and relief has been pouring in from many places. The Chief Ministers Relief Fund was one of the main recipients of the donations that were given by organizations and the ordinary people in India and abroad.

It was in this scenario that Indian Epilepsy Association Kochi decided to do something to help the flood victims. Most of the physician members of IEA realised that patients were finding it difficult to buy medicines as the priorities were for food and clothing first and then to furnish basic necessities in the house like kitchen utensils etc. In fact, many Persons with Epilepsy (PWE) in the flood affected regions presented to the hospitals with seizures as they could not take much with them to the relief camps, and had left their medicines behind, missing vital doses of AEDs. So IEA Kochi decided to identify PWEs in the flood affected regions and help them financially for a period of four to six months to rebuild their lives. A sum of Rs 6,00,000 was put aside for this and this corpus was to be distributed, taking into account the number of eligible candidates who came forward.

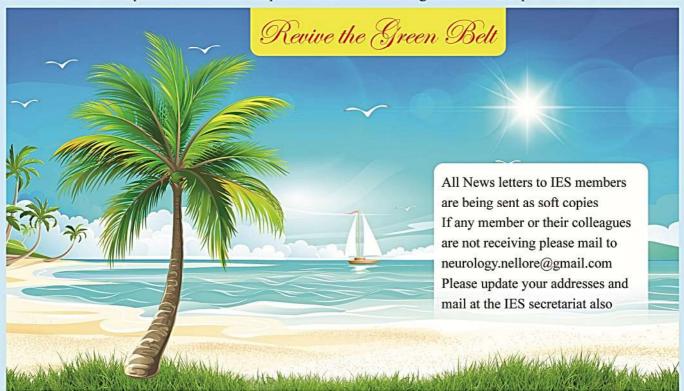
An announcement was placed in the vernacular newspapers across Kerala asking for PWEs in the flood affected regions to apply with the necessary documents which included the details of medical history,

certificate from the treating physicians and latest prescription, income certificate and the photo id as well as certification from the local authorities highlighting the impact of the damage due to floods. The selection committee consisted of the President, Secretary and Treasurer of IEA Kochi, under the chairmanship of Justice M R Hariharan Nair, retired Judge of the Kerala High court who is currently the Chairman of the Ethics Committee of the Kerala University of Health Sciences (KUHS) along with a few lay members. The documents submitted were examined and a final list of 19 persons who met all the criteria wasprepared in the first phase andthey were advised toprovide details of their bank accounts for transfer of funds. A disbursement plan was worked out depending on the medical needs of the individual patients as well as their income status. Ms. Saras Rajendran co-ordinated the project with the help of Ms. Syamili (social worker), Ms. Molly (office Assistant, IEA Kochi) and many other members of Kochi chapter.

On November 12th 2018, at a public function held in Kochi, Sri. P Sriramakrishnan, Hon. Speaker of the Kerala Assembly officially inaugurated the handing over of this financial assistance scheme in the presence of Dr. Subhas G T, National President and Dr. Rajendran, National Secretary General of the IEA. An initial amount of Rupees Ten thousand each were distributed to all the beneficiaries. Dr. Mathew Abraham, President IEA Kochi welcomed the gathering. Dr. Vinayan KP, Secretary, IEA Kochi introduced the working plan of this ambitious project. Further amounts will be transferred directly to the bank accounts of each beneficiary in installments depending on their eligibility.

Another 11 persons who saw the announcement of the function in the local newspapers came to the venue to enquire about the financial aid, showing that there are more flood affected persons with epilepsy who were not covered in the first phase. It was decided that these people would also be added to the beneficiaries list if they met all the other eligibility criteria as the second phase of the project – "Helping Hands" and that IEA Kochi would try to raise funds to increase the corpus so that they could also be accommodated.

IEA Kochi would request all the other chapters of IEA to come together and take part in this noble venture.



#### **UTTAR PRADESH**

#### Reported By: Dr.ATUL AGARAWAL





An epilepsy awareness interactive program was held on 24th December 2018, at Arya Mahila College, Shahjahanpur, 165 km away from Lucknow by Dr Atul Agarwal. Dr Sarika Agarwal welcomed Dr Atul, Dr Shweta Saxena introduced him to the students. Dr Atul explained various aspects related to epilepsy in an interactive manner and answered questions from audience. Principal Dr Kanak Rani proposed the vote of thanks and honoured Dr. Agarwal by memento. A dozen of teachers and large number of students attended talk.

#### CONFERENCE ANNOUNCEMENT





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#### ABOUT THE COVER PAGE

#### EMIL FISCHER and JOSEPH von MERING [1877]

EMIL FISCHER and JOSEPH von MERING, as German chemists created a history through their discovery of the first barbiturate, which they synthesized and was introduced as 'barbital' in the year 1902. Barbital was brought into the market as Veronal by Friedr. Bayer et Comp. Around 1904 Fischer also brought out many related compounds which included phenobarbital. Following this in the year 1912 a company called Bayer brought Phenobarbital in to the market as the first branded formulation – Luminal. Subsequently, Luminal became popular and was commonly prescribed as a sedative and hypnotic until 1860s when benzodiazepines were introduced.

However, the Phenobarbital's anticonvulsant properties in the treatment of convulsive disorders were identified only after 1912 by Dr. Alfred Hauptmann. It is said - this young physician observed that when he gave phenobarbital as a tranquilizer to his patients who reported with seizures their seizures were susceptible and were controlled by the drug which led to the discovery of its anti-convulsant properties. Hauptmann then continued to study his patients over a longer period who showed improvement with control over seizures. Until the use of phenobarbital most of the patients used Bromide for treatment of seizures as an effective drug then available. However, bromide had severe side effects with limited efficacy while phenobarbital showed better acceptability and efficacy.

Later, Phenobarbital was used to treat neonatal jaundice as it was shown to increase liver metabolism thereby lowering levels of bilirubin. Subsequently it was used for the prophylaxis in the treatment of febrile seizures for over 25 years. Currently despite the introduction of several newer anti-epileptic drugs the use of phenobarbital although limited is popular among LMICs and is an anti-convulsant under the list of essential drugs by WHO.

Reference: Wikipedia, the free encyclopedia - November 2018