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Epilepsy India

Newsletter of the Indian Epilepsy Association & Indian Epilepsy Society

Indian Epilepsy School 2013

Contents

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Editorial....

Seasons Greetings from the E I Team.

In the last three decades, Neuroscience has taken a quantum leap. This is largely due to the tremendous advances in the fields of Physics and other basic sciences. In the field of Epileptology , we are increasingly depending on non-invasive technology to accurately study and map the epileptogenic area in cases of Drug Resistant Epilepsy (DRE).

This allows the surgeon to accurately resect the epileptogenic focus sparing eloquent areas, like speech, sensory and motor areas of the brain. An exciting development is the Magneto Encephalogram (MEG). MEG measures the magnetic fields in the brain which is set up by the electrical fluxes in the brain. This technology also allows us to study many other normal fundamental processes in the brain like cognition, effects of ageing, information processing, perceptions etc. It is great news that India's premiere Neuro Sciences Institute, NIMHANS, is about to commission the first MEG in the country. In this issue, Dr Sanjib Sinha and Dr Satishchandra introduce the readers to this advanced scientific technology. EI congratulates Dr Satishchandra and his team and in future expect this knowledge to percolate to all of us to better the lives of PWE.

Drug resistant epilepsy (DRE) is definitely a major problem facing clinicians. If the clinician can see the red flags at the first visit itself, many trials of multiple drug regimens can be avoided and the patient can be counseled for non pharmacological options like epilepsy surgery, Ketogenic diet , Vagal nerve stimulation etc. There seems to be reluctance on the part of the clinicians to discuss these options with the patient/relatives and also resistance from the PWE/ relatives to try out these alternate options. It is imperative that the treating physician counsel the PWE about the benefits of non pharmacological options available in cases of DRE.

In this issue, the dietetic team from Amrita Institute of Medical Sciences, Kochi has given us a brief over view about the role of Ketogenic diet in DREs where surgical option is not possible.

Two fantastic academic events were held in Delhi in November. The 8th EEG Workshop was held on 12-13 November in New Delhi. Held under the aegis of ASEPA and ASNA, the event saw 60 delegates and 37 faculty members, both National and International, and was a resounding success as told by some of the participants. This event also had the joint EEG certification course (Part 1) in which 15 delegates appeared and more heartening is the fact that 14 of them succeeded.

Between November 13th and 16th the Indian Epilepsy School was conducted. There were 60 faculty members (National and International) for the 116 delegates who registered. Also the ASEPA Part 2 exam was conducted.

Dr Mehindiratta and Dr Manjari Tirpathi deserve fulsome praise for these academic feasts.

EI requests those members who have not yet registered for ECON 2014 to hurry up and register so as not to miss the academic and social feast prepared by the West Bengal Chapter.

National Epilepsy Day (NED) was observed by our IEA Chapters across the Country. We have received the reports from some Chapters. We are sure to receive activities from the remaining chapters as well. It is planned to dedicate the next issue entirely to the NED activities. It is heartening to note that the IEA Chapters are actively involved in propagating epilepsy awareness through the length and breadth of India. Dear member Chapters, please keep the IEA flag flying high. ■

Message from ILAE

Emilio Perucca
President, ILAE

It is my privilege to provide our colleagues from the Indian Epilepsy Association and the Indian Epilepsy Society with an update about ongoing activities at ILAE. Given the vision, dedication and energy of our former President, Dr. Solomon (Nico) Moshé, to follow him at the leadership of ILAE is a big challenge. However, it is also a wonderful opportunity to capitalize on the many ideas and initiatives that originated in the previous term. The organizational structure of ILAE has also been strengthened by the constitutional changes approved by the General Assembly in 2011, which provide for inclusion of Regional Chairs in the Executive Committee. This ensures an improved coordination between the central governance and our regional constituencies. I am fortunate to count on such a wonderful team!

The League remains strongly focused on its mission to improve the management of people with epilepsy and, ultimately, to achieve the goal of a world where no people's lives are limited by epilepsy. To fulfill our mission, many gaps need to be overcome: a diagnostic gap, a treatment gap, a knowledge gap, and an awareness gap. These gaps are prevalent in all regions of the world, although they are most acute in emerging countries. In the last term, we successfully synergized with national Chapters and with our partners, most notably IBE and WHO, to sensitize governments about the need to improve services for people with epilepsy, support advocacy initiatives to fight stigma and discrimination, and increase funding for epilepsy research. These initiatives have been particularly successful in Europe and in the Americas. Keeping the momentum going and building on these successes is a top priority for the present ILAE leadership, together with ensuring that similar initiatives take root in other regions. To move forward, we need a strong involvement of all our Regional Commissions and our national Chapters, and an improved trans-regional collaboration so that we all learn from others' experiences. These efforts are being complemented by a renewed engagement with our key partners. Together with IBE and WHO, we are now working on a global-level action aimed at reducing the barriers which limit access to effective anti-seizure medications.

A large component of the League's activities are carried out through our Commission and Task Forces, and I am pleased that the transition has taken place very smoothly - all new Commissions and most Task Forces are already in place, with well structured action plans. Needless to say, we are privileged to have the support from so many top professionals all over the world - interestingly, for the first time, the number of Commission and Task Forces members from Asia-Oceania is comparable to that from North America and Europe, an indication of the impressive growth of epileptology in South Asia and the Pacific region. To ensure continuity, previous Commission Chairs will continue to be part of the new teams - additionally, to fulfill an objective close to my heart, all Commissions now include at least one young team member chosen among "the epilepsy leaders of tomorrow". Hopefully, being part of our teams will prove to be a valuable mentoring experience for these young colleagues, and I am certain that our Commission and Task Forces will equally benefit from their fresh ideas, energy and motivation.

Education remains high in the agenda of the League. The organization of the 2014 Regional Congresses scheduled to take place in Capetown, Stockholm, Singapore and Buenos Aires is already advanced, and our global constituency is already providing input to the scientific programme of the 2015 International Epilepsy Congress in Istanbul. Other educational activities, including courses and fellowships, are being planned by our Regional and Topic-Oriented Commissions. Virepa, our distant education programme, is being expanded to include new topics. Finally, Epileptic Disorders, the newly acquired journal of the League, is being refocused to fulfill its educational mission. Not surprisingly, José Carrizosa, the new Chair of the Education Commission, and his team are busy in coordinating these activities.

The League is conscious of its role as primary repository for epilepsy knowledge, and it must strive to ensure all the documents that it endorses have the highest possible quality.In the next few months, we

will be publishing in Epilepsia two important position papers – the first is the operational definition of epilepsy (which complements the 2005 conceptual definition), and the second is the organization / classification of the epilepsies (which refines the 2010 classification proposal). In finalizing these documents, we are following for the first time a new process which the Executive Committee carefully codified: in addition to traditional peer review, position papers are placed on the ILAE website, feedback is solicited by our entire constituency, and an independent Task Force is then appointed to ensure that all public comments receive due consideration. The first experience with this process has been overwhelmingly positive, with hundreds of constructive comments received from all corners of the world, including many from India. I have no doubt that this process will improve the quality of our products, and strengthen the sense of belonging to our organization.

India is home to 12 million people with epilepsy – one fifth of the burden that this disease imposes on the world. I admire the work that Indian physicians and other health care workers have been doing over the years to improve the quality of epilepsy care across the country. India also has an impressive number of colleagues with top level epilepsy expertise, both in clinical disciplines and in basic science. I am most grateful for all their contribution to the League's activities, and I look forward to continue such collaboration for many years to come.

Indian Epilepsy School 2013

Report by Course Directors Dr. Man Mohan Mehndiratta and Dr. Manjari Tripathi

The residential Indian Epilepsy School was organized jointly by Indian Epilepsy Society (IES) and Indian Academy of Neurology (IAN) under the aegis of Commission of Asian Oceanian Affairs (CAOA) and Asian Epilepsy Academy (ASEPA), International League Against Epilepsy and was held at Hotel Atrium, Surajkund, Faridabad (NCR) in a peaceful location from 13th November to 16th November, 2013 (Wednesday thru Saturday).The theme of the school was "Enhancing Clinical acumen in Epilepsy Management".

We had 5 foreign faculty i.e. Professor Lim Shih-Hui (Singapore), Derrick Chan (Singapore), M.S. Gopinath (Australia), John Stern (UCLA) and S.B. Hong (South Korea) and 54 national as well as local faculty during Epilepsy School. Total 116 delegates from different parts of India, participated in Epilepsy School.

A total of fourteen sessions were held spread over four days. The topics of the sessions were as follows: Differential diagnosis of epilepsy-fits, faints & funny spells, Approach to a person with new onset epilepsy, Epilepsy Video Presentation Quiz by faculty, Benign epilepsy syndromes, Treatment decisions, When to stop AEDs? Non-epileptic paroxysmal, Morbidity & mortality in epilepsy, Epilepsy surgery, Video and case presentations by the faculty and delegates.

ASEPA Part II examination was also conducted during Epilepsy School on 14th November 2013. The Examiners were Professor Lim Shih Hui, Derrick Chan and Man Mohan Mehndiratta. Professor Manjari Tripathi was invited as an observer. One Candidate Dr. Umesh Kalane from Pune appeared in the ASEPA part II examination.

On the request of faculty members and delegates, morning nature walk of Tughlaqabad Fort, stretching across 6.5 km, built by Ghiyas-ud-din Tughlaq, the founder of Dynasty, was also arranged by the organizers without disturbing the session of Epilepsy School and this change was very much appreciated by all who could get up early for this nature safari.

Report on IES - 8th EEG Workshop 2013

Dr. Man Mohan Mehndiratta, Course Organizer
Dr. Manjari Tripathi, Course Director

Indian Epilepsy Society - 8th EEG Workshop was held at Janakpuri Superspeciality Hospital (an autonomous Post Graduate Institution), C-2/B, Janakpuri New Delhi, India from November 12-13 (Tuesday-Wednesday), 2013 under the aegis of Indian Epilepsy Society. Dr. Man Mohan Mehndiratta was the course organizer & Dr. Manjari Tripathi was the course director for the 8th EEG Workshop. Though it was planned to restrict numbers to 60, due to the enthusiastic response registration was increased to 113.

This time we further enhanced the participation of faculty from all over India and we invited 37 national and international faculties for this EEG workshop, including Dr. Lim Shih-Hui Chairman Asian Epilepsy Academy (ASEPA) from Singapore and Professor Derrick Chan-Singapore, John Stern UCLA-USA and M.S.Gopinath from Australia. Due to some unavoidable reasons Dr. Byung In-Lee, chairman Commission Asian Oceanian Association Affairs (CAOA) was not able to join this workshop. There were a total of eight sessions with details as follows: Interesting Case Presentation with impact of EEG on the Diagnosis, Basics and Normal EEG, Evolution of EEG and Identifying Normal EEG, Value of EEG in Epilepsies & Emergency Situations, Pediatric Age group Symposium, EEG Quiz, Spot the Diagnosis: Videos and case presentation. All the presentations received from International and National faculty were converted into PDF format and written on DVD to save the cost of printing and xeroxing.

Wi-Fi facility was provided to access the speaker's PPT presentation & EEGs on delegate's laptops, tablets and other mobile devices. We also made available facility of accessibility of presentation anywhere in the world. Another milestone was ASEPA-ASNA (ASEAN Neurological Association) joint EEG Certification examination (Part 1) for neurologist, neurology resident and EEG technologist.A total of 16 delegates registered for the examination and 15 appeared. The examination was through objective pattern comprising of 150 Multiple Choice Questions covering various aspects of EEG and to be completed in three hours. The purpose of the EEG Certification examination is to establish and improve standards of training and professional practice of EEG in Asia. Sixteen candidates were registered for this ASEPA part I exam and fifteen candidates appeared.

Fourteen candidates out of the fifteen who appeared in ASEPA part I examination, cleared the exam .This success rate is very heartening and one of the best so far.

Magnetoencephalography (MEG)

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Introduction

Functional mapping using magnetoencephalography (MEG) technology is a safe, non-invasive method for imaging human brain activity. It uses an array of highly sensitive sensors to detect and record the magnetic fields associated with electrical activity in the brain with millisecond precision, in addition to providing good spatial resolution. This makes MEG a powerful tool for studying the rapid brain events that underlie normal human cognitive processes as well as their disruption in disease states. MEG has been proven to be of clinical utility, enabling improved patient management in the evaluation of epilepsy as well as the presurgical mapping of visual, auditory, somatosensory, motor cortex and language functional areas. MEG is at its most powerful when combined with MRI. MRI provides anatomical images, while the MEG is used to overlay brain function, be it healthy or pathological.

The team : Dr Satishchandra, Dr. Sanjib Sinha, Mr. Natarajan Mariyappa, Dr. Velmurugan Jayabal, Mr. G Prasanth Kumar, Mrs. Gandham Kiran Jyothi.

MEG raises no safety concerns, is quick to set up and does not involve confinement in closed or small spaces. Another functional brain imaging technique, Functional Magnetic Resonance Imaging (fMRI), requires that the patient or subject be confined in a noisy, narrow tube known as the bore. Due to this difference, MEG is better suited to studies of clinical subjects, including children and elderly persons, psychiatric patients or others for whom fMRI scans may be difficult. In addition, the procedure differs from most fMRI scans in that the MEG subject may be in an upright seated position, allowing visual interaction with another person. These are important considerations for studies of emotion or other cognitive functions that may be affected by claustrophobic feelings in an enclosed bore. MEG also is completely silent, an advantage for studies involving spoken language or other auditory stimuli.

MEG is increasingly being used in the preoperative evaluation of patients with intractable epilepsy and for those who will undergo tumor resection surgery. In either case, the MEG can localize the precise areas that are, despite the pathology, still healthy and functioning. This helps the surgeon to determine a successful surgical approach and also how aggressively to resect a given area. With a "roadmap" of which areas to avoid, the surgeon has a better chance of performing the procedure without affecting critical functions such as the senses, language and motor control. These functions are controlled from so-called "eloquent cortex". For epilepsy surgery, MEG has the added benefit of being able to localize where the epileptic activity(s) originates. This information is invaluable in determining if the patient is a good candidate for surgery and also in planning the operation itself.

Beyond epilepsy and surgical planning, researchers are continually uncovering new applications for the unique capabilities of MEG in a variety of Functional Mapping investigations. This includes a range of neurological and neuropsychiatric disorders such as stroke, traumatic brain injury, Alzheimer's disease, autism and schizophrenia.

History of MEG

The first recordings of magnetic brain activity were performed in 1968 by David Cohen at the Massachusetts Institute of Technology in Boston (Cohen D. Science 1968;161:784-786). Cohen was able to detect the magnetic equivalent of the electric α-rhythm using conventional (i.e., non-superconducting) coils. The development of SQUIDs (Superconducting Quantum Interference Devices) in 1964/1965 allowed the recording of magnetic brain activity with high precision.

Basics of MEG

MEG is based on the detection of the very weak magnetic fields that originate from electrical activity within the brain. These signals are detected with an array of devices known as SQUIDs (superconducting quantum interference devices) that are placed close to the scalp. The array is mounted in a close fitting helmet and is cooled with liquid helium. MEG technology has evolved since its invention in the late 1960s and, in particular, the density of detector arrays has greatly increased; current state-of-the art systems have more than 300 channels. This, combined with increasingly more sophisticated analytical methods, leads to constantly increasing spatial resolution and data richness.

MEG source localization is the technique of inferring the location of the source(s) within the brain from signals measured at the scalp. There are several well defined approaches to perform this and researchers continue to make improvements.

MEG is fundamentally different from fMRI. In particular, MEG signals originate directly from electrical activity in the brain, providing very high (sub-millisecond) temporal resolution that is essential for studying rapid brain events that underlie mental processes. By contrast, fMRI provides good spatial resolution, but its temporal resolution is at least 1000 times less than that of MEG.

MEG and EEG are mutually compatible, so—in cases in which EEG setup is logistically feasible—it is possible to acquire both signals simultaneously, providing further opportunities for multimodal integration and source localization.

Clinical and Research Applications of MEG

Clinical and research applications of MEG include such neurological and psychiatric disorders as autism, traumatic brain injury, memory and brain function, schizophrenia, depression, as well as various learning disorders, including dyslexia. Furthermore, MEG is extensively used in normal cognitive functions that underlie memory and language.

How it works

MEG can measure fast, millisecond phenomena and also perform accurate localizations, often as precise as a few millimeters. It does this noninvasively (without injections or radiation) by measuring the magnetic fields that naturally emanate whenever electric current flows within groups of neurons in the brain. The fields measured are extremely weak, about a billion times smaller than the Earth's magnetic field. MEG uses very sophisticated instrumentation, sensitive enough to detect these weak signals, while simultaneously discriminating against interference from much stronger magnetic background noise.

MEG is rapidly becoming an indispensible brain imaging technology. It has been demonstrated to improve the surgical outcome of epilepsy patients based on the evaluation of several thousands of patients over the last 10 to 15 years.

Preparation of patient

MEG usually is an outpatient procedure. Patient preparation for MEG is relatively minimal and generally patients tolerate the examination extremely well. However, patients younger than about five years

of age may be too anxious or unable to cooperate, and therefore may require general anesthesia to complete the examination successfully. Light sedation, to reduce anxiety, also is sometimes used. No needles or physical exams are required.

Before the exam, the patient will be fitted with three or more head positioning coils whose purpose is to determine the precise position of the head relative to the MEG detectors during the scan itself. The doctor may also want to measure EEG simultaneously with the MEG. In that case, electrodes (either individually or configured in an array much like a bathing cap) also are affixed to the head. Next, the position of the coils and electrodes are precisely measured with a special wand called a digitizer.

All MEG studies are performed inside a magnetic shield, which is a large metal-walled room that helps keep interference from the environment out. Inside the room, the MEG device itself takes the form of a smooth helmet that completely covers the head, but is open in the front to enable the patient to see. The system can rotate, so the patient can either lie down on a bed or sit up in a chair during the scan. The doctor or technician performing the measurement will ensure that the head is completely inserted in the helmet and that the patient is comfortable.

If the MEG scan is to measure epileptic activity, then the patient will be measured for about 30 minutes to an hour. During this time, they will usually have no special tasks to perform and are even allowed to fall asleep. Patients can be given breaks, if needed.

If the scan is to localize sensory areas of the brain, then the patient will be presented with some stimuli. which could be tones to localize the auditory area of the brain; images on a screen to localize visual areas; or mild electric pulses , asking the patient to push a button every few seconds etc.. Some MEG centers also will localize language areas of the brain with, for instance, a reading or picture naming task.

After the MEG data collection is complete,if anesthesia was necessary, the patient will be sent to a recovery room, otherwise they are generally free to go home.

What the data is used for

After collection, the data will be combined and analyzed by a trained professional, usually a neurologist. From the recorded signals, clinicians will determine the origin of the brain activity. This applies to both pathological signals (epileptic spikes) and also healthy signals). These locations will then be combined with an MRI, showing images of the brain's structure. The combined images are then included in a comprehensive report. This, when pooled with other information, forms the basis for determining whether surgery is the best option for treatment and, if so, how to plan it.

NIMHANS is the premier institute of specialized training in the field of neuro-psychiatry in our country and is the main referral centre for neuropsychiatric disorders in south India. Hence MEG with its current clinical and research indications will benefit patients and researchers across the country.

Hon Minister for Health and Family Welfare Shri Gulam Nabi Azad presenting the ICMR Basanti Devi Amir Chand Award for the year 2010 for research in the field of Epilepsy to Dr P Satishchandra, Director and Vice Chancellor NIMHANS Bangalore.

EI team feels very proud of Prof Satishchandra's achievement and hope he will add many more laurels in his illustrious career.

Photo courtesy : Newsletter, IEA Bangalore Chapter

Ketogenic Diet and Epilepsy

Bri. Nivedita
Chief Dietician, Amrita Institute of Medical Sciences, Cochin

What is Ketogenic Diet ?

The Ketogenic diet is a high fat, low carbohydrate and protein diet used in the treatment of epilepsy. The Ketogenic diet is used for patients whose seizures have not been well controlled by anti-epileptic drugs.

The diet is based on the ketogenic ratio of the total amount of fat to the amount of a combination of carbohydrate and protein in the diet. The 'Classical' ketogenic diet contains a 4:1 ratio by weight of fats to combined protein and carbohydrate.

The diet mainly appears to be effective in children, but not in every child. It works by mimicking the effects of starvation. When fasting or starving, your body first uses up glucose and glycogen before burning up stored body fat. In the absence of glucose it produces chemicals called ketones, which provide energy. A ketogenic diet is predominantly comprised of lipids such as oils, butter and whipping cream. When the body's only option to produce energy is through the breakdown of lipids, the resultant digestion process is known as ketosis. The broken down fat produces ketone bodies that help to alleviate seizures in some people. However, the exact mechanism by which the diet works is not yet known.

Indications

Ketogenic Diet is generally indicated in drug resistant epilepsies where a surgical option is not feasible. It may work well in several genetic epilepsy syndromes, particularly in myoclonic astatic epilepsy and Dravet syndrome . It is also indicated in symptomatic focal and generalized epilepsies and Lennox – Gastaut Syndrome. In certain Genetic epilepsies like Glucose 1Transporter deficiencies, the diet will be therapeutic.

General rules for the ketogenic diet

1. Calorie intake should be approximately 75% of the recommended calorie level for the child's age and ideal weight.
2. Ideal weight should be based on recognized standards.
3. Most children are maintained on a 4:1 ketogenic ratio. Children under 15 months or obese children may be started on a 3:1 or 3.5:1 ratio of Fat: Protein +Carbohydrates.
4. Fluid intake should be restricted. A child should not drink more ml of fluids per day than the number of calories in the diet.
5. Diet must meet the recommended dietary allowance of protein.
6. Diet must be supplemented daily with calcium.

Calculation of the ketogenic diet

- The ratio of fats to carbohydrates and protein is based on the age, size, weight and activity level of the patient.
- A young child or infant often receives a 3:1 diet to provide additional protein
- Older children will receive a 4:1 diet
- Adolescents will often be started on a 3:1 diet

Types of Ketogenic diet

- Classical Ketogenic diet : As described above. The dietary ratio is maintained very religiously.
- Modified Atkins Diet : This is not as restrictive a diet as the classical KD. The ratio will be approximately 60% fat, 30% protein and 10% carbohydrate. This diet is found to be more acceptable in adolescents and adults.

Foods to Avoid

1. Carbohydrate – rich vegetables such as potatoes, carrots, tapioca and cereal grains should be eaten in moderation
2. High-carbohydrate fruits such as grapes, bananas, mangoes, as well as extracts and juices from these fruits, should be replaced with low-carbohydrate fruits such as watermelons, melons, strawberries etc.
3. Fluids with high carbohydrate contents, such as soft drinks and beverages are not recommended. These are high in sugar.
4. Processed foods, such as most canned foods, have carbohydrate contents that are high enough to disrupt the function of a ketogenic diet.
5. Milk and milk products should also be avoided because they have high carbohydrate content.
6. Sea foods like lobsters and squids which are low in fat content

How long to give ?

Ketogenic diet is initially maintained under strict medical supervision for a few months. Further continuation of the diet will depend upon the acceptability of the diet by the patient and family, seizure control and the growth and development of the child along with the therapeutic protocols of the individual centers. Majority of the children are able to continue the diet for many years without any long term safety issues.

Beneficial side effects of Ketogenic diet

Ketogenic diet has some significant beneficial side effects; these beneficial effects are evident in the early phase of the diet much before the seizures come under control. The main changes reported by the parents are improvement in alertness, responsiveness, understanding and social behavior and a subsequent improvement in the overall quality of life.

Attention IEA Chapters

- We request all chapters of Indian Epilepsy Association to send a report of the National Epilepsy Day activities along with photographs to be published in the forthcoming issue.
- We have a regular column “From the Heart” as told by a person with epilepsy or a care giver. We invite contributions to this column.
- Any endeavour needs feed back for constantly improving quality. Please send your suggestions and criticisms which will be published in future issues of EI.
- Contributions should be limited to 800-1000 words and can be sent to epilepsyindia657@gmail.com.

From the heart....

Nisha and Biju Mathew

It started in March 2010. We were in the Middle East and were blessed with our 3rd child, Katelin on March 30, 2010. It was a celebration for all of us as our two older children were looking forward to meeting their little sister. She was an adorable normal child; but on the 14th day she started showing some strange movements, which were new to us. We rushed her to the local hospital and the pediatrician confirmed that she was going through severe seizures. It was a shock for us as we had not heard this term before, nor had any of our family members ever experienced such a seizure. She was moved into an Intensive Care Unit (ICU) and was going through so many tests. We were seated outside the ICU waiting for a chance to see her or feed her. It was a feeling neither of us as parents could cope with.

Katelin was discharged after a week with one medicine and the findings were all normal. She was now looking perfectly fine and all of us were back to joyful mood. In a few days' time however, she started showing different types of movements again. This time we rushed her to a Government hospital in Dubai and again they put her through many tests, some of which were completely new to us. Finally they informed us that she had a very rare deformity in her brain and not many of the hospitals in Dubai were equipped to handle such a case. All the nurses in the hospital suggested we take our child to Kerala, our home state for further treatment.

We reached Cochin on the 9th of May 2010. All this time we never believed the reports we had received from doctors and we were hoping for new findings stating that our child was fine. To our shock, the pediatric epileptologist there confirmed that our child was suffering from cortical dysplasia and that we should immediately start medical treatment. We didn't trust him and started looking out for more options after surfing the internet, reading journals related to epilepsy and meeting doctors from various hospitals including doctors from Cleveland Clinic in the US. All the doctors confirmed the reports and findings and requested us to trust her present doctor, who was considered an expert in the field and to move on with our child's treatment without any further delay. However, as any parent would be, we were confused and just could not accept the fact and we turned rebellious towards our doctor. During this time, she started showing jerks and her doctor tried giving her the 21 days steroid injection. This injection usually works in most cases and we had high hopes for an immediate cure. After the injection, the seizures did not stop but she instead bloated up and became quite a chubby baby. The bloating was the after-effect of the steroid injection and we were totally let down and reached a "no hope" situation. All this time, our doctor was trying to explain and convince us about the consequences of each and every treatment but we were in a frozen state of mind and unable to accept any explanation given by the experts.

Time passed by and almost five months later, we reached a stage where we accepted that our child was suffering from a rare disease where there was not much hope for complete recovery. We also realized that all our family members and relatives were sympathizing with us and they just wanted to mourn and look at our baby with a feeling of "FATE". We didn't want this to continue and decided to make a change in ourselves so that the same positive feeling would reflect not only on our child but also on our older children and extended family. We realized we wanted our child to grow up as a normal healthy child and provide her with as much love and care as any parent would, despite knowing certain impossibilities that lie within. Our church leaders and friends helped us a lot in molding us to this level of positivity and confidence. We are both working parents and in order to continue our child's treatment, her doctor made a practical suggestion that we leave her in India. Although,

as parents, it was hard for us to accept it, we decided to respect the doctor and left her with our parents to continue with the treatment. She was under 4 different medications and still the seizures continued. Moreover she was getting these seizures 24x7, quietly at times and visible many times.

During the 9th month, she had a severe attack of seizures and she collapsed. She was admitted to the hospital and the doctors came up with the suggestion of having a surgery. This had been suggested during the 6th month, but our answer was a 'NO' then, thinking that it was impossible and way too risky to open the brain of an infant. The doctor from Cleveland Clinic had also confirmed earlier about the possibility of a surgery to save her from seizures but we just could not accept the fact. This time however, we were more mature and realistic and wanted to do everything in our power to help our child grow just like our other two children, who were both looking forward to having their sibling back in Dubai. We reached India and our doctor explained all the negatives that could happen after surgery but there was no other option at this time as our daughter had completely stopped reacting to any medication. There was a 50% chance, one that we were willing to take having seen our daughter suffer and hopeful that she would come out perfectly fine. No one can ever predict the future or what the outcome of any surgery is. Surrendering all unseen to our LORD, we left the child in His hands.

The surgery is called Hemispherectomy and it is a proven treatment for such seizures. The doctor advised us that this procedure generally is used only for people with epilepsy who do not experience improvement in their condition after taking different medications and who have severe, uncontrollable seizures. It is a very rare surgical procedure where one cerebral hemisphere (half of the brain) is removed or disabled. This procedure is used to treat a variety of seizure disorders where the source of the epilepsy is localized to a broad area of a single hemisphere of the brain, among other disorders. The information was too much for us to take but we trusted in our LORD and the doctor who was chosen by our LORD to treat our daughter.

The surgery was carried out on the 14th of March, 2011. By God's grace, she recovered completely in one month's time and got discharged from the hospital on the 4th of April 2011. From the time she was born she never recognized me, neither as a mother nor clung to me like a child would to their mother. She was just like a sweet 'doll' without any feelings, no movements except the seizure movements; no smile while seeing us nor did she have proper eye contact for even a second. After she was out of the ICU and into a room, I carried her with all the bandages on her head and with all the tubes on her body, and for the first time in one year, I felt her feelings towards me. I was very sure at that moment, she recognized me as her mother and that she was recovering. During all these twelve months, I knew that she never recognized me, not my heart beat or even my smell which is generally the feeling between a mother and her child. But at that very moment when she held onto me like a normal baby, I cried out to my LORD thanking HIM for this very special moment in our life and from here on her development started one after the other.

Slowly but surely, our child Katelin started looking at us and having proper eye contact. She turned one year old same month and tried to lift her head. The kindest blessing was that the seizures had stopped completely. She started growing and developing soon after the surgery and she is now 3.5 years old. There have been absolutely no seizures till date. Now we take her for Physiotherapy and Occupational therapy on a daily basis as a routine therapy and she has improved a lot. She has started speaking a few words, started taking few steps on her own, started singing, all the wonderful moments a parent looks forward to in their child's life. All of us,family and friends, enjoy each and every moment with her.

Now we have realized, as parents that it is our duty to be bold enough to face challenges in life, whatever they may be, and to take a step forward always, to help and guide our children live normally like every other child. We should also trust our doctors; we

lacked this faith in them initially as we never wanted to accept the truth or facts. Never allow sympathy to come in the way of improvement or to block out any positivity and never seek pity from others. Every child is normal with deficiencies in some ways, but with support from parents, we can raise them to become confident children and adults some day. Now, both older children are encouraging our baby to do all the things she was never allowed to or given a chance to do earlier. They help her be just like them to do all the things independently without anyone's help but at the same time with LOVE AND CARE. They are now looking forward to taking her to school with them and secretly do all the naughty stuff that siblings usually do together.

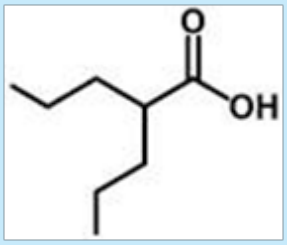
We are completely aware that we have a long way to go in ensuring Katelin's stability. We will continue to have complete trust in our Almighty and give her full support both mentally and physically to make sure she does everything independently to live a normal life, like our other two children.

We would like to take this opportunity to show our gratitude and love to my parents for taking care and providing love and support to Katelin during the initial difficult times and without a single complaint. We also wish to thank our doctor for all his patience towards us, for understanding our emotions as parents but at the same time strictly taking us to a goal which we believe we have achieved today. Our sincere thanks also, to the surgical team for their wonderful work.

Forthcoming Events

Epilepsy Drug 'Could Help Fight Cancer'

An anticonvulsant commonly used as to treat people with epilepsy could have a crucial role to play in future therapies for cancer, German scientists have discovered.



Valproate is a widely-used antiepileptic drug that blocks sodium ion channels. However, researchers from the German Cancer Research Center recently found that it also activates a toxic, viral protein called NS1, which allows panoviruses to replicate more rapidly.

These infectious agents are harmless to humans, but they are capable of attacking and killing aggressive cancer cells. Under the supervision of virologist Antonio Marchini, the scientists tested two groups of rats with cervical and pancreatic tumours to see how they responded to valproate and panovirus therapies.

One group received a virus dose in conjunction with the antiepileptic drug, whereas the other received the panoviruses alone. Only among the former groups did the tumours regress, in some cases completely, and certain rats remained free of recurrences a year later.

"The results are encouraging us to carry out further tests of this combination therapy," commented Marchini.

Fighting epilepsy with bacon, butter, and hot dogs

Baltimore, Md. (Ivanhoe Newswire) --About 3 million adults and children in the U.S. suffer from epilepsy or seizures. Many find relief through medication. However, when drugs fail seizures can have a huge impact on daily life. That's where fatty foods could save the day, even for those with life-threatening forms of epilepsy.

The fact that 14 year old Nilu is sitting here today doing homework is nothing short of what her mom calls a miracle.

The active teen was rushed to the hospital after having her first of several seizures.

"We were so worried and we were so emotional," Niranjala Wickremasinghe, Nilu's mom, told Ivanhoe.

Nilu had status epilepticus, a life-threatening condition.

"She was in very bad shape, to say the least. She had ongoing seizures for three months. She was essentially comatose during that entire situation and tried about seven or eight anticonvulsive medicines, none of them were helping her seizures," Eric Kossoff, MD, Pediatric Neurologist, Johns Hopkins Children's Center, told Ivanhoe.

That's when Dr. Kossoff decided to try something different, a high fat, low-carb diet, much like Atkins.

"Bacon, eggs, whipping cream, and oils, you know very high fat foods," Dr. Kossoff said.

Doctors aren't exactly sure why the 90 percent fat diet works, but, "about half the children we put on it will do better and about ten percent become seizure free," Dr. Kossoff explained.

Since Nilu was unconscious, her diet was delivered through a feeding tube.

"When it works, it works pretty quickly," Dr. Kossoff said.

One week later, Nilu woke up.

"I feel that I'm a really lucky person. I mean, I got another chance to live again," Nilu told Ivanhoe.

Now, with a new clinical trial underway others like Nilu could get the same second chance.

Nilu was on a modified Atkins diet for six months once she emerged from her coma. She is now back to a regular diet and is able to control the few short seizures she's had since with medication. The most common side effect of the diet is constipation, temporary higher cholesterol, and kidney stones are also possible.

Please read the article on Ketogenic diet on pg 10 - Eds.

ECON 2014 - Invitation

Hi all,

Greetings from ECON 2014 team, Kolkata. We are all set to have a memorable meeting on January 31st and 1st, 2nd February 2014.

The program has been meticulously prepared by the scientific committee of IEA & IES. We are sure you will find the program interesting with a wide coverage of various aspects of epilepsy and ample time for discussions. The organizing committee will try its best to arrange an effective social program and patient's forum. One of the special features will be an orchestra performance by handicapped children of Manovikas Kendra, a school for autistic and mentally handicapped children.

Kolkata in January is at its best. With mild winter (temperature ranges between 9-18 degree Celsius) the weather is enjoyable. The lush green Maidan, the spectacular Victoria Memorial, Eden Gardens, the mecca of world cricket, and the sparkling waters of river "Ganges" are only a few of the attractions that will surely beckon you to visit the city again and again. Then the delicious Bengali cuisine, which has mesmerized the whole world, is waiting.

Eden Gardens

A land of poets, intellectuals, academicians, singers and painters Bengal is proud of Tagore, Satyajit Roy. Manna Dey, Hemant Kumar, Amartya Sen. "Shantiniketan" the abode of Rabindra Nath Tagore is only 60 km from heart of Kolkata and a must see for all visitors .Not far from the madding crowd is the lush green "Sunderban " the home of the Royal Bengal Tiger. Among other places of interest are Belur Math, the place of Swami Vivekananda, Kali temples, Nicco amusement park, and the zoological gardens.

Belur Math

The venue is the Taj Bengal, one of the nicest hotel of Taj group, situated in the heart of the city. The main hall "Crystal room" can easily accommodate 550+ delegates. Lunch and dinner will be at lush pool side which has excellent ambience.

Colleagues, please come with your friends and family to experience one of the most exciting events of year 2014.

Please register today at www.ECON2014.org.in

15th Joint Annual Conference of Indian Epilepsy Society & Indian Epilepsy Association - ECON 2014

31.01.2014 (Friday)
Pre-Conference Workshop - Scientific Programme

Theme: Pediatric Epilepsies

0800 Hrs. Onwards : Registration

0845-0900 Hrs.	Welcome and Introduction of Faculty: Arabinda Mukherjee
0900-1100 Hrs.	Workshop–1: Non-Epileptic Childhood Paroxysmal Disorders
	Chairpersons: Pravina U. Shah & Trishit Roy
0900-0930 Hrs.	Overview and the Deductive Approach - Francis J Di Mario Jr –USA
0931-0950 Hrs.	Sleep Related Phenomena: Manjari Tripathi-India
0951-1020 Hrs.	Seizures and syncope: Francis J Di Mario Jr-USA
1021-1030 Hrs.	Discussion
1031-1100 Hrs.	Tea / Coffee break
1100-1200 Hrs.	Workshop–1 Contd:
	Chairpersons: Vrushali V. Nadkarni & Abhijit Chatterjee
1100-1125 Hrs.	Headaches and Epilepsy: Phillepe Ryvlin-France
1126-1150 Hrs.	Psychogenic non-epileptic seizures in children: Phillepe Ryvlin
1151-1200 Hrs.	Discussion
1200-1300 Hrs.	Lunch
1300-1530 Hrs.	Workshop–2: Epileptic Encephalopathies in Children
	Chairpersons : JMK Murthy & Asit Senapati
1300-1325 Hrs.	Overview–Vrajesh Udani-India
1326-1355 Hrs.	Epileptic Encephalopathies of EarlyInfancy: Deb Pal-UK
1356-1425 Hrs.	Dravet Syndrome andMyoclonic Astatic Epilepsy: Ulrich Stephani-Germany
1426-1500 Hrs.	West Syndrome and Lennox-Gastaut Syndrome: Andrew Lux
1501-1530 Hrs.	Discussion
1531-1600 Hrs.	Tea / Coffee break
1601-1715 Hrs.	Workshop–2: Contd.
	Chairpersons: K.P.Vinayan & Goutam Ganguly
1601-1630 Hrs.	Rasmussen Syndrome and Landau Kleffner Syndrome: Deb Pal-UK
1631-1700 Hrs.	Progressive Myoclonic Encephalopathies in Children: P Satishchandra India
1700-1715 Hrs.	Discussion
1716-1915 Hrs.	Case Discussion: Case Studies in Pediatric Epilepsy
	Chairpersons: Sita Jayalakshmi & Arijit Chattopadhyay
	Moderator: Dr K Radhakrishnan
	Participants (8+5 minutes for each speaker): Deb Pal, Ulrich Steffani, Andrew Lux, Phillepe Ryvlin,F J DiMario, K Radhakrishnan & Amit Halder
1930-2030 Hrs.	Cultural Programme
2030 Hrs. onwards	Dinner
1430-1600 Hrs.	IEA-EC Meeting - Hall B
1600-1700 Hrs.	IEA-IES Joint Meeting - Hall B
1700-1800 Hrs.	IES-EC Meeting - Hall B

01.02.2014 (Saturday)
Main Conference - Scientific Programme

0800 Hrs. onwards	Registration
0800-0900 Hrs.	Session 1(Hall A)
	Award Papers session
	Chairpersons: P Satish Chandra & H.V.Srinivas
0900-0945 Hrs.	Session 2(Hall A)
	IEA Presidential Oration- Vrushali V Nadkarni (President-IEA)
	Chairpersons: Pravina U Shah & Satish Jain
	Topic
	Introducer
0945-1030 Hrs.	Session 3 - A.D. Sehgal Oration - Ambar Chakravarty
	Chairpersons: V.Natarajan & Sheffali Gulati

	Topic : "Paradoxical Phenomena in Epilepsy"
	Introducer : Man Mohan Mehndiratta
1030-1100 Hrs.	Tea / Coffee
1101-1125 Hrs.	Session 4
	Guest Lecture-Philippe Ryvlin-France
	Chairpersons: Nandan Yardi & Sanjib Sinha
	Topic "SUDEP"
1130-1215 Hrs.	Session 5
	Shobha Arjundas Oration- S K Shankar
	Topic : Pathology of Epilepsy – does it give a key to pathogenesis
	Introducer
	Chairpersons: N Upadhyay & R Shukla
1216-1300 Hrs.	Session 6 Symposium I Seizures & Medical Diseases
	Convener-Tapas K Banerjee
	Chairpersons: Gagandeep Singh & Sagar Basu
1216-1245 Hrs.	Seizures in ICU : S S Nandy
1246-1305 Hrs.	Seizures in Immunocompromised Sangeeta Rawat
1310-1400 Hrs.	Lunch
1400-1515 Hrs.	Session 7 - SYMPOSIUM II Looking beyond seizure control
	Chairpersons: Sarat Chandra & Nadir Bharucha
1400-1420 Hrs.	Limbic connectivity: Anatomical substrate of behaviors disturbance in epilepsy: Ambar Chakravarty
1425-1445 Hrs.	Epilepsy AED and cognition Sanjeev Thomas
1450-1510 TLE	Neuropsychiatry
1515-1540 Hrs.	Tea / Coffee
1545-1645 Hrs.	Session 8 Platform Presentation
Hall-A Chairpersons : V.S.Saxena & Ajaya Mahanta	
Hall B Chairpersons: A.B.Shah & Debashish Basu	
16.45-17.45 Hrs.	Session 9 Poster presentation Session
	Chairpersons: Sita Jayalakshmi, Param Preet Singh, Sangeeta Rawat, K.S.Anand, Kiran Bala, Debashish Basu
17.45-18.00 Hrs.	Tea/Coffee
18.00-1840 Hrs.	AGM-IEA (Hall B)
1840-1925 Hrs.	AGM-IES (Hall B)
1930-20.30 Hrs.	Inauguration (Hall A)
20.30-21.00 Hrs.	Cultural Program by Manovikas Kendra
21.00 Hrs. onwards	Dinner

02.02.2014 (Sunday)

Main Conference - Scientific Programme

0730 Hrs. onwards	Registration
0800-0900 Hrs.	Session 10 Epilepsy and E-Technology
	Introduction: Man Mohan Mehndiratta
	Chairpersons: Pravina U Shah & Manjari Tripathi
	"Tiny light and bright future in epileptic highway"- Lakshmi Narsimhan
	" Use of gadgets in epilepsy: HELP! I am having a seizure!"-Rajesh Benny
0900-0945Hrs.	Session 11H.C.Bajoria Oration Suchitra Narayan
	Topic : Ensuring "Quality of Life" for persons with epilepsy
	Chairpersons: B. Rajendran & Alak Pandit
	Introducer
0946-1030 Hrs.	Session 12 Guest Lecture- Ulrich Stephani
	Chairpersons: Arabinda Mukherjee & Manjari Tripathi
	Cerebral network in childhood epilepsy
1031-1100 Hrs.	Tea / Coffee
1100-1215 Hrs.	Session 13 - Clinico-Pathological Conference
	Chairpersons: Man Mohan Mehndiratta Sanjeev Thomas
	Clinical Discussant: Joy Desai
	Pathologist: M.C.Sharma
1215-1330 Hrs.	Session 14 K.S.Mani Patient Forum
	K.V.Muralidharan, Parmeswaran and Ashok Kumar
1330-1400 Hrs.	Valedictory Function
1400 Hrs.	Lunch

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