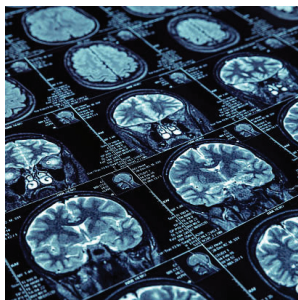
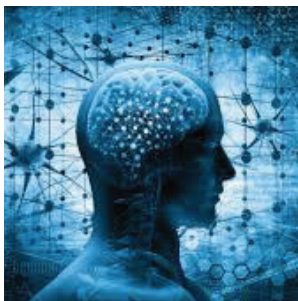

Scientific Tracks & Sessions

December 04, 2019

CNS, Neurosurgery & Stroke 2019



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Early decompressive Craniectomy in Subdural Hematoma and good outcome – Case report

Richam Faissal El Hossain Ellakkis

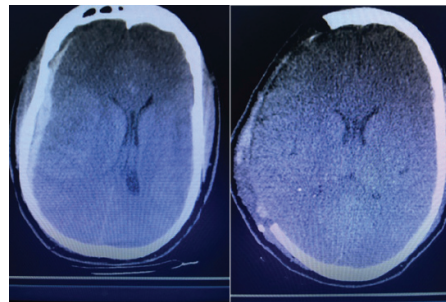
Hospital Municipal Padre Germano Lauck, Brazil

Case Report: A 20-year-old man presented to our Hospital with severe brain trauma, hit by a car while he was riding a bike. On the arrival at the emergency room his Glasgow Coma Scale (GCS) was 4 (eyes 1; verbal 1 and motor 2) with fixed midriatic pupils and submitted to mechanical ventilation. A CT scan was performed and revealed a subdural hematoma, midline shift greater than 5mm and a swelling, Marshall V (surgically evacuated). The patient was submitted to a decompressive craniectomy and hematoma evacuation two hours after the accident and sent to ICU with ICP monitoring. About 48 hours after surgery a new CT scan was performed and revealed a good outcome and then we suspended the sedation and 7 days after the trauma the patient woke up without neurological deficits. Currently the patient is doing his last year in the Faculty of Biomedicine.

Discussion: Some authors did not see benefits in early surgery although the average time was 5 hours after the accident and in many cases the worse patients that underwent to early surgery had a poor outcome. We did not find a specific paper describing the outcome in patients with a very poor GCS (less than 5) and fixed pupils, although the pupils abnormalities remains a critical feature for surgical indication.

Conclusion: We believe that even in patient with severe brain trauma, poor GCS and non-reactive pupils, early surgery


especially if it is performed before 4 hours can probable improves the outcome, considering other clinical features such as blood pressure, oxygen saturation.



Biography

Richam Faissal El Hossain Ellakkis has completed his graduation in Medical School at the Federal University of Mato Grosso do Sul and the residence of Neurosurgery at Hospital de Base, São José do Rio Preto. Fellowship in Skull Base Tumors and Neurovascular at University of São Paulo. At present living in Foz do Iguaçu in the position of Neurology and Neurosurgery Coordination at Hospital Municipal Padre Germano Lauck.

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Investigation of the protective effect of Heparin pre-treatment on Cerebral Ischaemia in Gerbils

QingShan Ye

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The interruption of cerebral blood circulation may cause stroke characterized by high Neurological Deficits (NDs) as a result of neuronal dysfunction or destruction. Heparin may exert a neuroprotective effect against cerebral ischaemia/reperfusion injury. Objective: The objective of this study was to investigate the mechanism underlying the effects of heparin pre-treatment on cerebral injury in the gerbil. Materials and methods: A total of 80 healthy Mongolian gerbils were randomly divided into four groups to establish cerebral ischaemia model by bilateral carotid artery occlusion: control (no anaesthesia and surgery), sham (no occlusion), non-anticoagulation (occlusion), and anti-coagulation treatment groups (50IU/100g heparin pre-treated, occlusion). Gerbils were anesthetized with 40mg/kg pentobarbital sodium through intraperitoneal injection before operation except for the control group. Then, the ND and Histopathological Damage (HD) scores were determined. The percentage of Tumour Necrosis Factor (TNF)-a- and interleukin (IL)-1b-positive cells were calculated based on immunohistochemical results. The mRNA and protein levels of caspase-9, caspase-8, FasL, and calpain were evaluated with real-time Polymerase Chain Reaction (RT-PCR) and western blotting, respectively.

Results: Compared with non-anticoagulation group, heparin

pre-treatment (50IU/100g) delayed the onset of dyspnoea ($p < 0.05$), and showed a significant decrease in ND ($p < 0.01$), mortality rate ($p < 0.05$), HD ($p < 0.01$) and percentage of positive cells for TNF-a, IL-1b ($p < 0.01$) in cerebral ischaemia gerbils. Besides, the expression levels of caspase-9, caspase-8, FasL, and calpain were reduced after pre-treatment with 50IU/100g heparin. Discussion and conclusions: The damage caused to gerbil brain was reduced upon pre-treatment with heparin, possibly through the amelioration of neuronal cell apoptosis and expression of TNF-a and IL-1b. These findings are expected to provide a new breakthrough in the study and treatment of cerebral ischaemia.

Biography

QingShan Ye has done thousands of cases of anesthesia work, no patients have adverse reactions and complications. The resuscitation anesthesia of a large number of critically ill patients was successfully organized. By adhering to the principle of "never give up" until the last minute, a large number of patients were pulled back from death. He is a high-level professional and technical talent of Ningxia hui autonomous region, the director of the medical quality control center of Ningxia anesthesiology, and the person in charge of the construction of the national key clinical anesthesia department of the health department of People's Hospital of Ningxia Hui Autonomous Region.

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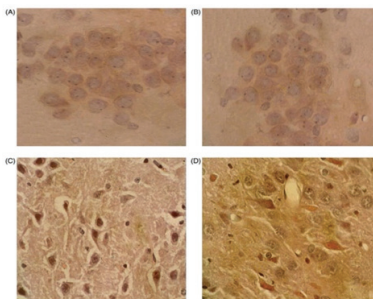


Figure 4. Results of immunohistochemistry for TNF-α expression detection in the hippocampus (CA1-3). A: Group I; B: Group II; C: Group III; D: Group IV. Magnification: 400x.

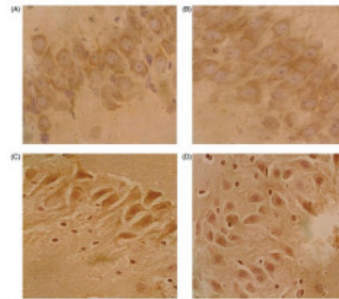


Figure 5. Results of immunohistochemistry for IL-1β expression detection in the hippocampus (CA1-3). A: Group I; B: Group II; C: Group III; D: Group IV. Magnification: 400x.

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Quantitative changes of Annexin and Syndecan in early Ischemic distant post conditioning of MCA occlusion in Rats

Maria Eduardovna Kolpakova

Pavlov First Saint Petersburg State Medical University, Russia

Introduction: The Structural and functional integrity of the BBB (Brain-blood barrier) is determined by many mechanisms, including intercellular neurovascular interactions. Data on the participation of annexin and syndecan molecules in the mechanisms of brain recovery after stroke are few. The aim of the work is to reveal quantitative changes of annexin and syndecan molecules on the model of focal occlusive ischemia in postconditioning in the early post-stroke period.

Materials and methods: The Experiments were performed on sexually Mature male rats of Wistar stock weighing 220-250 g (nursery "Rappolovo" RAS, Leningrad region) (n=13). Experimental groups were formed: control (30 min. ischemia) (n=7) and a group with ischemia and multiple early ischemic postconditioning (n=6). Animals were anesthetized with chloral hydrate (450 mg/kg, intraperitoneal). Body temperature of the animals was maintained at 36.5-37.50 C with the help of heating table and monitored using a rectal sensor. Microsurgical introduction of the filament (Doccol, USA) introduced into the left middle cerebral artery (MCA) by Koizumi J. (1986) Method under an operating microscope (Carl Zeiss, Jena, Germany). During the operation, tissue blood flow was controlled by Lack-01 (LASMA, Russia). The duration of circulatory disorders in the basin of the left MCA (filamentous occlusion) in all cases was 30 minutes, then the filament was removed, and the time of subsequent reperfusion was 48 hours. The experiment used animals with a degree of blood flow reduction of more than 70 % of the original and the restoration of blood flow in the reperfusion period of more than 80 %. After the operation, the animals kept in a warm box to maintain body temperature until they came out of anesthesia.

Postconditioning was performed, starting from the first minutes of reperfusion, by briefly clamping the femoral artery on the symmetrical lower limb for 5 minutes 5 times every hour. Analysis of plasma protein content ANXA5 and SDC-1 analyzed by Enzyme-linked Immunoassay (ELISA) using a set of reagents (RayBiotech, USA) at a wavelength of 450nm on a flatbed spectrophotometer (Clariostar Plus, Germany).

Results: Analysis of plasma samples of animals with 30 min. ischemia showed the following results of the average concentration of annexin molecules (ng / ml): 41.3 ± 2.3 . For animal plasma samples with 30 min. ischemia and early distant ischemic postconditioning, this indicator was (ng / ml): 42.1 ± 4.9 . Analysis of animal plasma samples from 30 min. ischemia showed the following results of the average concentration of syndecan molecules (ng / ml): 41.4 ± 3 . For plasma samples of animals with 30 min. ischemia and early distant ischemic postconditioning, the indicated index was (ng / ml): $54.9 \pm 6^*$ ($p < 0.05$).

Conclusion: In a situation of ischemic/reperfusion brain damage, the syndecan molecule may be involved in restoring the permeability of the Blood-brain barrier, while annexin is a predictor of its damage. Both molecules are likely are involved in the formation of brain edema.

Biography

Maria Kolpakova is currently working as a Head of Pathophysiology Laboratory at Academic Institute for Biomedicine, Pavlov First Saint Petersburg State Medical University, St. Petersburg, Russia She has completed her Ph.D. at the Pavlov First Saint Petersburg State Medical University, St. Petersburg, Russia.

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Alteration of extracellular matrix molecules in the developing mouse Brainstem**András Birinyi**

University of Debrecen, Hungary

Several studies have demonstrated that molecular and structural composition of the Extracellular Matrix (ECM) in the central nervous system undergoes profound transformation during embryonic and early postnatal development. The aim of this study was to detect the changes of staining pattern of different ECM molecules in the developing mouse brainstem by using histochemical Wisteria Floribunda Agglutinin (WFA), Hyaluronic Acid Probe (HA) and immunohistochemical (aggrecan, neurocan, versican (GAG beta), TN-R and HAPLN1) methods.

We found that HA, neurocan and versican reactions showed diffuse neuropil staining at very early embryonic stage (E13.5), but the Perineuronal Net (PNN) composed of these molecules were observed only postnatally (P7). We could not find any aggrecan, WFA or HAPLN1 staining before birth. Postnatally WFA and aggrecan established PNN in the reticular formation and in the vestibular and other brainstem nuclei. Postnatally WFA, aggrecan and HAPLN1 were restricted to the neuropil of some brainstem nuclei, in contrast to HA, neurocan and TN-R which were found throughout the brainstem.

Our results show that at early stages of development only a diffuse staining of ECM molecules is present in the neuropil of the brainstem. The formation of a definitive PNN is recognizable postnatally and fully developed in two weeks old animals. We detected spatiotemporal differences in the distribution of different ECM molecules both in the neuropil and perineuronal net in various brainstem areas. The pattern of ECM expression appears to be related to the functional maturation of brainstem neural circuits, including developmental processes such as neurogenesis, synaptogenesis or synaptic plasticity.

Biography

András Birinyi gives lectures, seminars and practices in gross anatomy, histology and embryology to medical and dentist students, pharmacists, as well as physiotherapists. His scientific activities are related to the field of quantitative morphology and neurochemistry by using intracellular and fluorescent labelling of neurons and investigating them with light, confocal and electron microscope. He studied the morphology of motor related neuronal circuits in the spinal cord and brainstem of different amphibian and mammalian species.

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The significance of telemedicine network for neurosurgery in Slovenia**Tomaz Velnar**

University Medical Centre Ljubljana, Slovenia

The number of invasive procedures in medicine is increasing, as is the employment of new technological achievements. In the era of information-communication technology, one such achievement is also the telemedicine network. Telemedicine is defined as use of medical data, mostly in emergencies, which emergency services are sharing between themselves by using electronic communication and with the purpose to improve healthcare, health and educational services in outpatient and emergency situations. In Slovenia, it is known as the Telekap (TeleStroke) network, which was primarily designed for fast and efficient management of stroke patients. The Telekap has been considered to provide any patient with symptoms and signs consistent with acute neurosurgical pathology a quick expert clinical evaluation, a review of diagnostic findings, a diagnosis, decision making, emergency treatment recommendations and postoperative advice. In the neurosurgical community, the system is frequently used also for conveying vital information regarding subarachnoid haemorrhage and trauma. Particularly in neurosurgical emergencies, this communication system offers thorough information about the extent and location

of the bleeding and facilitates the preoperative planning of the neurosurgical intervention. Numerous factors have all contributed to optimal conditions for Telekap implementation in Slovenia, including the opportunity to improve access and quality of care, narrow window of time frame and treatment efficacy, the resources required for ground and helicopter medical transportation and the expansions and improvements of the medical care dedicated information-communication technology. As a result, the Telekap is being used extensively in the national health care and its use is still rising. From our experience so far, the system should be expanded to other neurocentres as well to all neurosurgery departments in order to facilitate patient management, their acute hospital care and inter-speciality collaboration.

Biography

Tomaz Velnar, MD, PhD is a neurosurgeon and assistant professor at Ljubljana Medical Centre. He is involved in tumour and vascular neurosurgery, as well as paediatric pathology, especially spina bifida operations, neuroendoscopy and craniostomies. He is also active in research, covering both preclinical and clinical fields.

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Effects of Oleuropein on Neuronal modulation

Aynur Müdüroglu Kirmızıbekmez

Nisantasi University, Turkey

Neurodegeneration, which increases with aging, decreases cognitive and motor function. Neuronal death in neurodegeneration is mostly caused by neuroinflammation, mitochondrial dysfunction and oxidative stress. Recently, many studies are concentrated on slowing down, even stopping, the neurodegeneration using different molecules. In addition, slowing the neurodegeneration down has beneficial effects on learning and memory. Importantly, recent studies on oleuropein have shown that it has neuroprotective effects.


In this study, we investigated the effects of oleuropein on different brain waves patterns. Effects of oleuropein with dietary intake on neuronal modulation was studied on 12 subjects. EEG recordings of the voluntary subjects were analysed using ASA software. Our results show that the difference of alpha frequency magnitude between two hemispheres has decreased, beta frequency magnitude has decreased on the left hemisphere, theta frequency magnitude has decreased on both hemispheres, gamma frequency magnitude has especially decreased on right hemisphere and the slowest wave, the delta wave, frequency magnitude has significantly increased on both hemispheres. When the overall brain activity is examined, we identified a general decrease on brain wave frequencies.

Our results show that oleuropein may have anxiolytic effects via change of neuronal modulation. Suppression of slow waves may have effects on learning mechanism. However, dose dependent increase of the anxiolytic effect may act contrary and repress learning mechanisms.

Biography

Aynur Müdüroglu Kirmızıbekmez graduated from Istanbul University Faculty of Science and Literature in 2005. In 2008, she received her master's degree from the Department of Neuroscience, Istanbul University Experimental Medicine Research Institute with the thesis title "Research on the relationship between atherosclerotic stroke formation and interleukin 15 gene polymorphism". In 2013, she received her Ph.D degree from the Experimental Medicine Research Institute Advanced Neurological Science Program with the thesis title "Behavioral and molecular investigation of the Interaction of Neuropeptide Y and CART (Cocaine and Amphetamine Regulated Transcript) in the Central Nervous System". Examination of neurodegenerative diseases at the molecular level has taken place in many of her research projects, including antiaging, learning and decision making mechanisms. She has various scientific articles published on journals and presented on scientific conferences and symposiums.

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Cage fusion or Plate fixation after three level anterior cervical discectomy

Hamdi N Mostafa

Misr University for Science and Technology, Egypt

Cervical disc herniation is commonly treated by Anterior Cervical Discectomy and Fusion (ACDF), if conservative management has failed. Fusion is needed after ACDF as anterior longitudinal ligament will be absent after doing the operation especially if multiple levels are needed. The occurrence of complications as cage subsidence and adjacent segment failure related to length of follow up as they are increasing in percentage is directly proportional to the length of follow up. Fusion is needed after ACDF as anterior longitudinal ligament will be absent after doing the operation especially if multiple levels are needed. Some authors prefer to do fixation with fusion for the previous fact while others proved that fusion may give the

same results as fixation with fusion. we analyse the results for patients underwent 3 levels ACDF with cage fusion for short term and long term follow up in multiple centers as visual analog score for neck pain & brachialgia.

Biography

Hamdi N Mostafa has completed the M.D. Degree of Neurosurgery at 2007 from Cairo University, Egypt. He is the head of Neurosurgical department and chief of the spine unit, Associative professor at Misr University for Science and Technology, Egypt. He has over 40 publications that have been cited over 60 times, and over 80 spoke in different countries.

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Plasma exchange as a first line therapy in acute attacks of Neuromyelitis Optica Spectrum Disorders

BL Kumawat

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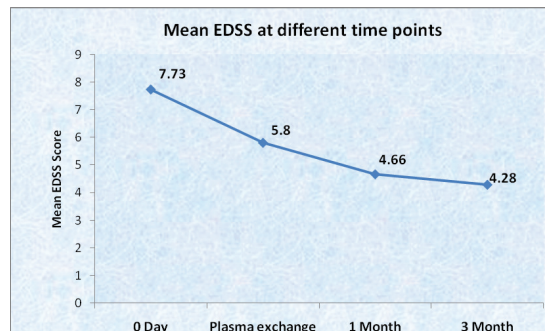
Background: Neuromyelitis Optica Spectrum Disorder (NMOSD) is a demyelinating disorder of central nervous system with deleterious effects. At present Intravenous corticosteroids are used for the relapse as the first line of treatment, but with only a class evidence III-IV. Having an underlying humoral immune mechanism in the pathogenesis of NMOSD and as it is rightly said that “**Time is Cord and Eyes**”, delaying the time to start plasma exchange (PLEX) awaiting favorable outcome in response to corticosteroids is detrimental for the patient. Hence PLEX may be a promising first line therapeutic approach in the management of severe attacks of NMOSD.

Objective: To evaluate the efficacy of PLEX as the first line of treatment for the acute attacks in patients with NMOSD, that is being largely used as an add-on therapy for more than 10 years and also to define the time opportunity window for the starting of PLEX.

Materials and methods: After institutional ethical committee clearance the study was conducted to analyse the therapeutic efficacy and safety profile of PLEX as a first line therapy in thirty patients diagnosed with NMOSD over a period of thirty months. PLEX was performed using a Hemonetics Mobile Collection Systemplus machine with due written consent including the risks and benefits of the treatment that is being proposed to the patient/relative in their own language.

Results: A total of 30 patients were analysed, out of which 16 were females and rest males. Eighty five percent of the patients were in the age group of 25 to 35 years. All the

patients had severe Expanded Disability Status Scale (EDSS) scores at the baseline, and 73.33% showed significant




improvement following PLEX. The only predictor of good outcome was the time to PLEX i.e. shorter delay better is the outcome.

Conclusion: The study ascertained the importance of early PLEX as a therapeutic intervention in severe attacks of NMOSD irrespective of their Anti-Aquaporin 4 (AQP4) antibody status.

Biography

BL Kumawat is currently working as a senior professor of neurology at SMS Medical College and Hospital at Jaipur, Rajasthan, in India. He studied DM Neurology in Medical College Jaipur. He has been awarded twice for his outstanding work in the college. He also presented and published his work many times in the international forums and journals.

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To study serum magnesium level in patient with Migraine and efficacy of combination of folic acid and magnesium in treatment of Migraine

Shalin Shah

Artemis Institute, India

Background: Pathophysiology of migraine involves different mechanisms including modulation of central and peripheral pain structures and release of vasoactive peptides. Studies revealed decreased levels of micronutrients riboflavin, magnesium and coenzyme. Deficit of nutrients could play role in the pathophysiology. Treatment with nutritional supplement might benefit for patients who cannot tolerate chemical drugs.

Methods: In this cross sectional analytical observational study, Magnesium levels of 56 patient checked. Then recruited into Folic acid + magnesium (FA+Mg) and Flunarizine. Headache Impact Test (HIT) score was evaluated pre and post treatment after 2 month. Concomitant improvement and adverse events was checked.

Results: Mean magnesium was 1.9877 ± 0.1355 with range between 1.65-2.34mg. 21.4 % had low magnesium. Mean magnesium found in lower normal range. Pre HIT was between 56-66 with mean of 66.30. In FA+MG, 27 patients had Pre HIT of 64.93 ± 5.196 and in flunarizine, 29 patients had 67.59 ± 4.524 . Comparison showed significant

difference (p value - 0.046). Post HIT in FA+MG was 53.81 ± 10.340 and Flunarizine was 54.55 ± 8.919 . Comparison showed no statistical difference (p value - 0.776). Comparing percentage difference with FA+MG having 17.0898 ± 14.79 and flunarizine having 18.7929 ± 15.3326 with no statistical differences (p value - 0.674). Response to treatment and Side effects showed no statistical difference between both groups (p value - 0.685).

Conclusion: Hypomagnesemia would be one factor causing migraine and should be checked in patients with suspected migraine. Starting prophylaxis with Combination of Folic acid and magnesium would be better.

Biography

Shalin Shah, has finished his DM neurology last year from prestigious amrita institute of medical science, Kochi, India. His mentor was Dr. Anand kumar who is head of department in amrita institute. He had done work and thesis of vascular headache. At present he is doing his Stroke and neurointervention fellowship.

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Blood pressure optimization in different types of Stroke

Birendra Kumar Bista

NeuroCardio and Multispecialty Hospital, Nepal

Stroke alters the cerebral autoregulation as a result blood pressure is elevated in most of the stroke patients. Different stroke types namely, intracerebral hemorrhage, ischemic infarct and SAH (subarachnoid hemorrhage) each require different ranges of BP blood pressure optimization to maintain CPP and MAP. Inappropriate ranges of BP result as rebleed, infarct evolution and cerebral edema. The stroke types require different MAP(mean arterial pressure), CPP (cerebral perfusion pressure), Systolic Blood Pressure (SBP) and Diastolic Blood Pressure (DBP) to maintain adequate cerebral perfusion. Blood pressure optimization is among one of the most important steps in neuroprotection. This systemic review presents the latest updates in BP management in acute stroke. It also stipulates recommended ranges of CPP, MAP, ICP (Intracranial

Pressure), SBP and DBP, for acute stroke management. Emphasis on, injectible antihypertensives only in acute stroke is given and commonly used IV (Intravenous) agents are also listed.

Biography

Birendra Kumar Bista, is one of the first neurologists of Nepal. He has been pioneering in field of neuroscience in Nepal and established the first neuroscience center of eastern Nepal. Through years the work of this neuroscience center has been recognized home and abroad. He shows keen interest in medical management and providing state of art services to this impoverished region of Nepal. Recently he added the first stroke center of Nepal. He firmly believes in continuous updated education and its implementation in hospital practices.

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Likelihood of rising Stroke in populace of western India - A case control study**Bhavesh Shroff**

Medical College Baroda, India

Statement of the Problem: Cerebrovascular accident (Stroke) is a non-communicable disease of increasing importance. According to the World Health Organization (WHO), 15 million people suffer from stroke worldwide each year. Globally, in 2013 there were 6.5 million stroke deaths; this makes stroke the second most common leading cause of death.

The National Commission on Macroeconomics and Health, India, has estimated 1.67 million stroke cases in India in 2015. Due to the increasing prevalence of hypertension, diabetes, dyslipidemia, fast changing lifestyle and restructuring of population, stroke will be an epidemic in India in the days to come.

Few studies have been carried out in developing countries like India. So, this case control study intended to know the presentation in addition to risk factors, patterns of warning signs and symptoms of stroke in patients admitted to state tertiary care Hospital.

Assuming the power ratio of the number of controls same as numbers of cases specifying values for two sided confidence level 95% and odd ratio 2.15 which was the minimum risk factor in previous study was taken to calculate sample size.

Conclusion & Recommendations: After studying of 148 cases of stroke and same controls, we conclude that most common type of stroke is ischemic stroke followed by haemorrhagic stroke. After multivariate analysis we found, modifiable risk factors were mainly mental stress, active & passive smoking, hypertension and obesity.

Due to the sheer magnitude, devastating consequences and residual sequelae of the stroke, early intervention in the form of patient education, modification of the lifestyle, non - pharmacological and pharmacological interventions for modifiable risk factors should be an integral aspect of patient care.

Biography

Bhavesh Shroff has graduated (MBBS) from Baroda Medical College, The Maharaja Sayajirao University, Vadodara, Gujarat, India and completed his post-graduation (MD Community Medicine) from the same college. At present, he is an Assistant Professor in the Department of Community Medicine at Medical College Baroda. Since last eleven years, he is involved in teaching, training and research work for undergraduate and post graduate students. The Study was carried out as a part of the thesis of his PG student.

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Reduced anticoagulant effect of Dabigatran in a patient receiving Concomitant Phenytoin

Shalin Shah

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Reduced Anticoagulant Effect of Dabigatran in a Patient Receiving Concomitant Phenytoin **Objective** — Interaction of dabigatran with phenytoin in a patient with Cerebral venous thrombosis **Introduction** Dabigatran, a direct thrombin inhibitor, is an oral anticoagulant that was approved for use in the United States in 2010. It is currently indicated for the prevention of stroke in patients with Atrial Fibrillation (AF) and for treatment and prevention of deep vein thrombosis and pulmonary embolism.[1] It is a pro drug which acts as a substrate for Permeability Glycoprotein (P-gp). Medications that induce P-gp (e.g., carbamazepine, rifampin, and phenytoin) can reduce the bioavailability of medications that are P-gp substrates. It mainly results in suboptimal anticoagulation and increases risk of stroke and venous thrombosis. [2] There are recent studies which supports use of NOACS in CVT patients. Phenytoin is anti epileptic drug which is a potent enzyme inducer which reduce efficacy of drugs metabolized by P 450 enzyme system. P-gp induction by phenytoin has only been demonstrated in animals (Phase I studies) [3, 4]. Among elderly population , epilepsy is reported in 30-40% of stroke patients [5] . AEDS can either reduce or increase absorption of NOAC metabolism leading to reduced efficacy of this drugs. A reduced NOAC metabolism can increase significantly the risk of bleeding in these patients. The clinical relevance of the interaction between dabigatran and phenytoin has not been well described. We describe case of interaction between Dabigatran and phenytoin in a patient with cerebral venous thrombosis. **Case report** A 25 years old male patient with no significant history presented as focal seizures. He was diagnosed as CVT. He was started on full dose phenytoin and enoxaparin . He started gradually improving with near complete recovery in 2 days. He was discharged on Dabigatran 150mg twice a day and phenytoin 100mg three times a day. Around 2 months later he presented with recurrence of right focal seizures. Repeat MRI brain showed increase in filling defect in superior sagittal sinus.

He had gradual clinical improvement with no further seizures and was discharged in next 3 days .So inspite on full dose NOACS (dabigatran), he had repeat Venous thrombosis. **3. Discussion** Dabigatran does not interact with the cytochrome P450 system. It acts as a substrate for Permeability Glycoprotein (P-gp) . So drug interactions are restricted to absorption across the intestinal wall only where P gp is present. Drugs that induce cell efflux transporter P-glycoprotein (P-gp) and/or CYP450 may decrease DOAC plasma concentrations and increase the risk for thromboembolic events, while drugs that inhibit P-gp and/or CYP3A4 may increase DOAC concentrations and therefore increase bleeding risk. Medications that induce P-gp (e.g., carbamazepine, rifampin, and phenytoin) can reduce the bioavailability of medications that are P gp substrates, such as dabigatran. This can result in suboptimal anticoagulation, increasing the risk of stroke and venous thrombosis. [2] In current literature the relevance of interaction between dabigatran and phenytoin has not been well described. Few case reports have been reported. The U.S. labeling for dabigatran are less clear. The product label for these agents cites only an example of a P-gp inducer but does not list all of those that may affect the efficacy of dabigatran. Although it should be intuitive that phenytoin is an inducer, it is not specifically listed in the prescribing labeling, which could easily lead to oversight and subsequent prescribing of this combination. **Conclusion** - In conclusion, interaction between dabigatran and phenytoin is important and clinicians should be aware of such potential interactions.

Biography

Shalin Shah , has finished his DM neurology last year from prestigious amrita institute of medical science , kochi ,India. His mentor was Dr. Anand kumar who is head of department in amrita institute. He had done work and thesis of vascular headache. At present he is doing his Stroke and neurointervention fellowship.

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Joint event on
8th International Conference on
**NEUROLOGICAL DISORDERS,
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NEUROLOGY AND NEUROSURGERY

December 04-05, Dubai, UAE

Experience of implementing integrated services for children with Epilepsy in primary health care and primary health nurse role in an outreach financially - constrained district in Pakistan

Muhammad Akbar Malik

The Brain Associates Lahore, Pakistan

Introduction: Of the 35 million people with epilepsy who live in developing countries, around 85% receive no treatment at all. Cost-effective, sustainable epilepsy care services, delivering uninterrupted Antiepileptic Drugs (AEDs) through established primary health care facilities, are needed to decrease these treatment gaps.

Objectives: The aim of this study was efficacy assessment of integration of childhood epilepsy in primary health with help of primary health nurse and local paediatrician to narrow the treatment gap among Children With Epilepsy (CWE) in an outreach financially-constrained district in Pakistan.

Methods: The data about Childhood Epilepsy Treatment Gap (CETG) and impact of integration of childhood epilepsy in primary health care in improving it was collected in free paediatric neurology camps on 7th and 8th December 2018. We evaluated 240 CWE (160 fully supported and 80 as control), in whom treatment was initiated with AEDs at least 3 months prior the study date. Data was collected by a questionnaire divided into three parts 1) demographical information about patients, 2) information about childhood epilepsy treatment and AED(s) medication adherence profile using the Morisky Medication Adherence Scale-8 (MMAS-8) and 3) data on intervention-effectiveness of the Community Childhood Epilepsy Center (CCEC) on bridging the treatment gap in comparison with cohort not being intervened by this center.

Ethical approval was obtained from the institutional ethics committee.

Results: Age ranged from 04 months - 18 years with male to female ratio of 1.26:1. AED(s) adherence by self-report was 85% (was 42% in 2014 without community intervention) among the supported CWE and was 40% among the control: without any gender preference in either group. After two years

of intervention by Top-Down-Bottom-up-Childhood-Epilepsy-Program-Center (TDBUCEPC), CETG dropped to 20% (was ≥90% in 2014 without local community support), however still it was 82.5% without any support. Nonaffordability treatment cost was the most important cause of non-adherence to AEDs among CWE; however other less important caused were lack of trained personals, parent's negligence and misbelieve. The most effective cause of adherence promotion and bridging the wide treatment gap was integration of childhood epilepsy services in free local primary health care.

Conclusion: Our experiences showed that strengthening of the local primary health care service along with training or primary nurse and local pediatrician is an efficient approach in bridging the huge treatment gap among CWE in financially poor settings. This experience may be of value for other resource-poor settings.

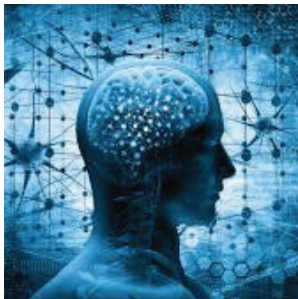
Biography

Muhammad Akbar Malik was born in a very small village, on the eastern brim of River Chinab, just 5 Km from Maralah Barrage, without any barrier between the purest natural water the river and his village. After initial education in Open Air High School Kulluwal, got his Medical Education from Lahore, was trained in Lahore. He got highest qualification in the field of pediatrics. He went to Ireland and passed his MRCPi in the field of paediatric. Then he moved to UK and was trained in Pediatric Neurology and pediatric neurophysiology. He established the first teaching pediatric neurology and neurophysiology department in Children's Hospital Lahore. He is currently working as the Chairperson charity program Top-Down-Bottom-Up-Childhood-Epilepsy-Program with aspiration to bridge the treatment gap of childhood epilepsy in outreach and financially constrained communities in Pakistan, in addition to his voluntary services of visiting consultant paediatric neurologist in Shaukat Khanum Memorial Cancer Hospital and Research Centre Lahore. His interest in Neurology began medical school. Neurology cases were like solving a puzzle when he was trying to localize the lesion. Later on, he learned that Neurology and sorting out this in financially constrained settings.

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December 04-05, Dubai, UAE

Advance and novel research technique used for the targeted release of anti tumor drug to treat Glioblastoma tumors

Iram Khan

Jamia Hamdard University, India

Statement of the Problem: Glioblastoma is the most frequently occurring and devastating primary brain tumor. Treatments involved surgery followed by radiotherapy with concomitant and adjuvant chemotherapy however faces a primary hurdle in delivery of drug to BBB (blood brain barrier) and has found insufficient penetration of drug to attain a therapeutic effect. New strategies are highly required with improvised and innovative technology such as a degradable delivery device that provides targeted multiple adjuvant chemotherapeutic agents to the target site for the treatment of tumor. Adopting a nanotechnology technique such as Electrospinning technique helps in manufacturing of nanofibres and thus nanofiber based Drug Delivery System (DDS) was designed for oral delivery of anti-tumor drug in the cerebral cavity for an effective treatment of Glioblastoma tumors.

Methodology & Theoretical Orientation: The study involves fabrication of polymeric drug loaded nanofibres using Electrospinning process. The prepared nanofibres formulation were validated by various characterization methods using FTIR and surface morphology by AFM, SEM, TEM analysis, drug release, in-vitro are studied, cytotoxicity of nanofibers was evaluated by MTT assay in U87 MG Brain tumor cell line. In vivo antitumor efficacy of nanofibers was evaluated in Albino Wistar Rats bearing tumors.

Findings: The formulations of nanofibers were well-characterized and in vitro release and kinetic studies

suggest sustained release. The antitumor potential of the polymeric drug loaded nanofibers were evaluated against U87 MG Brain tumor cell line. In vivo antitumor efficacy of nanofibers shows primary tumor resection decreased in treated with oral administered nanofibers, compared with the blank nanofibres, systemic or locally administered drug and the control group.

Conclusion & Significance: The experimental result shows that the biodegradable nanofibres are having high drug loading efficiency and drug releasing efficiency after oral formulation in rats showing excellent biocompatibility, and results obtained reveals adopting drug eluting nanofibres may result in sustain delivery of anti-tumor drug in the cerebral cavity in order to attain enhanced therapeutic effect.

Biography

Iram Khan has completed her M.Pharm in Quality Assurance and was declared Gold Medalist for her B.Pharm from Uttar Pradesh Technical University. She is currently pursuing her PhD from Jamia Hamdard, New Delhi in Pharmaceutics Specialization in Quality Assurance under supervision of Prof. (Dr.) Yasmin Sultana. She has published book chapters and papers in journals and has presented many papers and attended various seminars and conferences.

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