A0017: Repeated stages of fugue in patients with epilepsy: case series

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Objective: To find out prolonged recurrent states of fugue in patients with epilepsy.

Methodology We have included five cases from psychiatry and child guidance OPD, Institute of Medical Sciences, B.H.U., Varanasi. The initial evaluation was done by consultant in-charge psychiatry and CGC OPD. The investigations were sent and finally all patients were referred to neurology OPD and the neurologist made final diagnosis. For further confirmation, CT scan/MRI head and EEG recording of all patient were done.

Results: The age of all five cases varied from 12 to 45 years and out of five, two were females; they belonged to lower socioeconomic status and were educated. Two patients had positive family history of epilepsy but their siblings did not have similar complaints. All five patients have initial agitation followed by wandering aimlessly for varied durations. Findings of CT scan, laboratory investigations were normal but EEG in all five patients was abnormal.

Conclusion: The fugue stages in psychological disorder differ from patients with epilepsy/organic causes of fugue, in dissociative fugue, there are temporal relation found with psychological trauma. In those phases, patient maintains his safety with different identity and the initial symptom of abnormal behavior unlikely occurs. We found in these cases that patients were not able to maintain themselves during fugue stage and their initial presentations were agitation and the important differences were found in EEG reports, those were abnormal.

A0018: Hemispherotomy in Adults. Is It Safe?—A Prospective Observational Study in Comparison to Children

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Introduction: Hemispherotomy (HS) is a safe and effective procedure for drug-resistant epilepsy in appropriately selected patients. There are few publications for HS in adults with less than 100 patients reported till date. This series compares the HS in adults and pediatric age groups, which is first of its kind.

Methods: Data were prospectively collected for HS patients during April 2014 to August 2017. Cutoff age was 18 years. Comparison between the groups was done for seizure onset, duration of epilepsy, frequency of seizures, number of drugs, intraoperative blood loss, postoperative seizure control postoperative stay, postoperative motor functions, and preoperative and postoperative intelligence quotient.

Results: Total 55 pediatric and nine adults underwent HS. The seizure onset was earlier in children and duration of epilepsy was longer in adults. The frequency of seizures per day was 14.62 ± 2.57 in children, while in adults was 7.71 ± 5.21 per day, with the p-value of 0.49. Mean number of drugs was similar in the preoperative and postoperative periods in both. In this study, 85.5% of children and 88.9% of adults had class I seizure outcome (p = —0.59). Blood loss and postoperative stay were similar in both the groups. No patient had permanent motor deficit. There was transient worsening of power in one pediatric patient and in four adult patients. IQ remained same in both the groups. One adult patient had meningitis and another had hydrocephalous requiring shunt placement.

Conclusion: Hemispherotomy is as safe and effective procedure in adults as in children in appropriately selected patients.

A0019: Benzimidazole Group of Drugs Possess Significant Anticonvulsant Properties in Experimentally Induced Animal Models

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Objective: To study the anticonvulsant properties of benzimidazole group of drugs in experimentally induced animal models.

Methods: In this study, experimental animals were induced convulsions by two different Methods and which included, electrically induced with the help of electroconvulsiometer with the placement of electrodes over the ear and the subcutaneous (SC) administration of pentylenetetrazole (pTZ) in the dose of 70 mg/kg BW.

The study included a total of eight different groups with group I: control for PTZ, group II: standard for PTZ (sodium valproate), group III: benzimidazole group drug 1 for PTZ, group IV: benzimidazole group drug-2 for PTZ, group V: control for MES, group VI: standard for MES (diphenylhydantoin), group VII: benzimidazole group drug-1 for MES, and group VIII: benzimidazole group drug-2 for MES. Statistical analysis was carried with the help of statistical software (GraphPad Instat version 3.06), 32 bit for Windows and Results were expressed as mean/median ± SE.

Results: The Results of the study indicated statistically significant rise in onset of seizures (in seconds) in groups III and IV when compared with the control (group I) in chemically induced convulsion model with p-value < 0.05. It was also noted that the duration of seizures significantly declined in both the experimental test drug groups (i.e., groups III and IV) when compared with the control group (group I) with p-value less than 0.05. Similarly, the total number of seizures in 1 hour also reduced significantly in both the experimental test drug groups (i.e., benzimidazole group drugs 1 and 2) in comparison to the group I (p < 0.05). The study Results confirmed that, for all the above four parameters, there was no statistically significant difference seen among the standard and experimental test drug groups with p-value of more than 0.05. In MES

model, there was statistically significant decline in total scores of seizures in both the experimental test drug groups when compared with the control group for MES model ($p < 0.01$). The above said parameter was in comparison to the standard drug in group VI with respect to the experimental test drug groups (groups VII and VIII, respectively, with [$p > 0.05$]).

Conclusion: The benzimidazole group of drugs had significant anticonvulsant properties in experimentally induced animal models.

A0020: Evaluation of Anticonvulsant Activity of Propranolol by using Electrically Induced Animal Models

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Objective: To evaluate the anticonvulsant activity of propranolol in Wistar albino rats by maximal electroshock (MES)-induced seizure model.

Methods: The study was approved by the Institutional Animal Ethics Committee (IAEC). The study was conducted in accordance with the CPCSEA guidelines. Healthy, adult Wistar albino rats of either sex weighing between 180 and 250 g were used for the study. The animals were procured from the central animal house and were acclimatized in the experimental laboratory for 7 days. The study consisted of three groups with six animals in each group. Group I: control (equivalent volume of normal saline, i.p.); group II: diphenylhydantoin (25 mg/kg BW, i.p.); group III: propranolol (i.p.). Anticonvulsant activity in Wistar albino rats was assessed by MES model. The data were expressed as median ± SE. Statistical significance among study groups was carried using Graph Pad Instat Software, by ANOVA test followed by Bonferroni's post hoc test.

Results: In group II (standard) all animals were protected by absence of THLE when compared with group I (control). Group II also exhibited significant decline in scores when compared with control group. Administration of propranolol in groups III also showed significant percent decline in THLE as well as scores when compared with group I. Percent decline in THLE and scores in group III were comparable to the group II.

Conclusion: Propranolol exhibits significant anticonvulsant activity in MES model in Wistar albino rats.

A0021: Screening of Antiseizure Activity of Aryl Acetic Acid Compounds in Wistar Albino Rats by using PTZ and MES Tests

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Objective: To screen the antiseizure activity of aryl acetic acid compound in Wistar albino rats using PTZ and MES tests.

Methods: After obtaining the approval from Institutional Review Board (IRB), the healthy adult Wistar albino rats of either sex weighing between 180 and 250 g were procured from the central animal house of the Institution. The CPCSEA guidelines were followed for conducting the experiments on animals. The animals were housed in the research laboratory for 1 week before initiation of study. The animals were then randomly selected and divided into control, standard, and test groups ($n = 6$). Group I: control for PTZ; group II: standard for PTZ (sodium valproate, i.p.); group III: aryl acetic acid compound for PTZ (i.p.); group IV: control for MES; group V: standard for MES (diphenylhydantoin, i.p.); and group VI: aryl acetic acid compound for MES (i.p.). One-way ANOVA with Bonferroni's post hoc test was used for statistical significance.

Results: The standard drug sodium valproate in group II and test drug aryl acetic acid compound in group III showed significant reduction in onset, duration, and number of seizures when compared with the group I (control). Similarly, the standard drug diphenylhydantoin in group V and test drug aryl acetic acid compound in group VI showed significant reduction in scores of seizures and THLE when compared with the group IV (control).

Conclusion: The experimental drug aryl acetic acid compound had significant antiseizure activity in both PTZ and MES tests in Wistar albino rats.

A0022: Peroxisome Proliferator Activated Receptor σ (pPARσ) Agonists and Their Role on Epilepsy-Induced Seizures: An Experimental Evaluative Study

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Objective: To evaluate the antiepileptic properties of peroxisome proliferator activated receptor σ (*p*PARσ) agonists in chemically and electrically induced seizures in experimental laboratory animal models.

Methods: Prior to the experimentation on animals, the research proposal was approved by the appropriate official bodies (Institutional Research Committee [IRC] and Institutional Animal Ethics Committee [IAEC]). The research protocol followed the guidelines as per the directions from the INSA and CPCSEA throughout the study period. The study had a total of eight groups and two animal models each within four groups. Groups I to IV were for chemically induced seizure model and groups V to VIII for electrically induced model. There were vehicle control, standard, and two experimental test drugs belonging to PPARσ agonists for groups I to IV and groups V to VIII for chemically and electrically induced seizure models, respectively. The data were analyzed using appropriate statistical test methods and the p-value of less than 0.05 was considered to be statistically significant.

Results: In this study, there were a total of six parameters (four for chemically induced seizure model and two for electrically induced seizure model) which accounted for determining the statistical difference among control, standard, and experimental test drug groups. In this study, it was found that there was a difference between the experimental test drug groups PPARσ agonists+ in comparison to the control group for number, score, onset, and duration of seizures in chemically induced seizure model (*p*-value more than 0.05). Statistical analysis also confirmed that there was a statistically significant difference between the standard (group II) and