Evaluation of potential of standardized extract of *Centella asiatica* (L.) Urban leaves in epilepsy and associated post-ictal depression

**Anwesha Mukhrjee**, **Akanksha Sinha**, **Amit D. Kandhara**, **Subhash Bodhankar**, **Vishwaraman Mohan**, **Prasad Thakurdesai**

*aDepartment of Pharmacology, Bharati Vidyapeeth Deemed University, Poona College of Pharmacy, Pune-411038, Maharashtra, India*  
*bIndus Biotech Private Limited, 1, Rahul Residency, Off Salunke Vihar Road, Kondhwa, Pune 411048, India*

**INTRODUCTION**

- Epilepsy: neurological disease; electrical firings of a group of neurons appearing in the central nervous system.
- INDCA: Prepared from hydroalcoholic extract of *Centella asiatica* by Indus Biotech Pvt. Ltd. and standardization by HPLC. It has anti depressive and migraine activity etc.

**OBJECTIVE**

- To evaluate the effect of INDCA in PTZ induced animal models.

**MATERIALS AND METHODS**

- Animal: Male Wistar rats (200-250 gm)

<table>
<thead>
<tr>
<th>Group</th>
<th>Treatment</th>
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<tbody>
<tr>
<td>I</td>
<td>Normal (Dil. water)</td>
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<tr>
<td>II</td>
<td>Control (PTZ (30 mg/kg) + Dil. water)</td>
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<tr>
<td>III</td>
<td>INDCA (10 mg/kg) + PTZ (30 mg/kg)</td>
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<tr>
<td>IV</td>
<td>INDCA (30 mg/kg) + PTZ (30 mg/kg)</td>
</tr>
<tr>
<td>V</td>
<td>INDCA (60 mg/kg) + PTZ (30 mg/kg)</td>
</tr>
<tr>
<td>VII</td>
<td>INDCA (100 mg/kg) + PTZ (30 mg/kg)</td>
</tr>
</tbody>
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**STATISTICAL ANALYSIS**

- Data analysis: Graph Pad prism 5.0 and SPSS 16.0 software
- Data of Seizure Intensity Score and onset of convulsion: non-parametric Two-way ANOVA followed by Mann Whitney test
- Data of open feld and tail suspension: non-parametric One-way ANOVA followed by Kruskal-Wallis test
- Data of incidence of convulsion and mortality: Chi2 test
- Data of Biochemical parameters: One way ANOVA followed by Dunnett’s test
- Value of P < 0.05 was considered to be statistically significant.

**RESULT**

**Fig. 1** Effect of INDCA on severity of Seizure Intensity Score in PTZ induced Epilepsy. *P < 0.05 as compared to PTZ control group *P < 0.05 as compared to normal group

**Fig. 2** Effect of INDCA on onset of convulsion in PTZ induced Epilepsy. *P < 0.05 as compared to PTZ control group

**Fig. 3** Effect of INDCA on brain GABA, 5-HT, DA and NA level in PTZ induced epilepsy.

Data was analysed with one way ANOVA followed by Dunnett’s test. *P < 0.01 as compared to normal group. *P < 0.05, **P < 0.01 and ***P < 0.001 as compared to normal group.

**CONCLUSION**

INDCA suppress PTZ-induced seizures & ameliorates its associated post-ictal depression via increasing in monoamine & GABA level.

**REFERENCE**