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RESEARCH PAPER

ANTIEPILEPTIC ACTIVITY OF AQUEOUS EXTRACT OF *DATURA INOXIA* LEAVES AGAINST SEIZURE INDUCED BY MAXIMAL ELECTROSHOCK AND CHEMICALLY IN MICE

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The existing description is a study of the antiepileptic effect of *Datura inoxia* as a recognized herb that is used in Ayurveda for asthma, rheumatism, tumors, cough, fever, antimicrobials and epilepsy. Toxicity studies were carried out for standardizing a dose of aqueous extract of *D. inoxia*, maximal electroshock (MES) and isoniazid (INH) induced seizures. The Albino mice model were used for screening the antiepileptic activity. As per OECD guideline no. 423, up to 2000 mg/kg body weight of recommended dose of extract were found toxic. Animals were treated with aqueous extract of 200, 400 and 600 mg/kg body weight. Phenytoin was used as reference anticonvulsant drugs for comparison. The investigation stated the significant interruption in the INH-induced clonic seizure and in MES model, reduction in the period of hind leg extensor phase. In MES model, *D. inoxia* exhibited a significantly decrease in the duration of hindlimb extension with 400 and 600 mg/kg dose, respectively. Comparable results were obtained in INH model by delayed onset of a clonic seizure. Aqueous extract of *D. inoxia* exhibited antiepileptic action against MES and INH-induced epilepsy in animal models.

Key words: Antiepileptic activity, *Datura inoxia*, Phenytoin, Maximal electroshock, Isoniazid.

INTRODUCTION

Naturals products have a wide history in treating of a variety of disorders [1-4], including epilepsy (goatopathy) which is a relatively common neurological disorder. Epilepsy is defined as a group of long-lasting disorders related to a nervous system which is characterized by the spontaneous occurrence of seizures mostly linked with the loss of consciousness and body activities (convulsions) [5]. Epilepsy has often explained as the incidence of at least 2 motiveless seizures separated 24 hr apart but as per latest international consensus, only a single epileptic seizure as long as there is a continuing predisposition to create epileptic seizures [6]. Several etiological influences foremost to a first epileptic seizure in the aged cause a continuing predisposition to seizures [3-7]. The annual incidence is 50/100,000 per year [7, 8]. Almost 5-10% of the inhabitants will have at least 1 seizure, with the maximum prevalence happening in premature and old age [9]. WHO estimates that eight people per 1000 worldwide have this disease [10]. More than half of the 50 billion individuals with epilepsy worldwide are

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