



Synthesis and antiseizure evaluation of (Z)-3-(phenylimino)indolin-2-one derivatives in mice

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Abstract:

Epilepsy is a condition that is characterized by multiple or recurrent seizures due to sudden neuronal firing in the brain. A single seizure does not categorize as epilepsy. Epilepsy is the most common serious chronic non-infective neurological condition in the world. Only 60% to 70% of patients with epilepsy exert an adequate and acceptable response to currently in use antiepileptic drugs. In the other words, there is to some extent resistance to the present drugs in epileptic patients. On the other hands, current antiepileptic drugs cause significant adverse reactions. In the current research, a new series of isatin based antiseizure derivatives (**3a-3m**) were synthesized (**Scheme 1**) and their antiseizure activity was evaluated by maximal electroshock (MES) and pentylenetetrazole (PTZ) methods and obtained results was compared to diazepam as reference drug. Neurotoxicity of the synthesized derivatives was also assessed using rotarod protocol. Spectroscopic data was also collected to characterize the corresponding structures. Melting point analyzer was applied to measure the related melting points.

Keyword: Synthesis, Antiseizure, Isatin, Electroshock