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Antiseizure and Neurotoxicity Effects of Ligustrosid Glycoside Isolated from Fraxinus Graffithii Clarke Compared to Phenytoin and Diazepam

Abstract

A study was conducted to determine antiseizure and neurotoxicity effects of Ligustrosid (A CNS Active substance) isolated from Fraxinus Graffithii Clarke compared to Phenytoin and Diazepam (antiseizure standard). Phenytoin has only Anti MES effect. Diazepam has anti MES, anti Metrazol, anti Strychnine, anti Bicuculline, and anti INH effect. Ligustrosid has anti MES, anti Metrazol, anti Strychnine, anti Bicuculline, and anti INH effect. Therefore Ligustrosid has broad spectrum of antiseizure effects than Phenytoin and Diazepam. Clinically, it may be predicted that Ligustrosid will have clinical efficacy against various seizure type, i.e. Generalized Tonic Clonic, Partial seizure, Myoclonic seizure, Absence seizure, and Status epilepticus. Neurotoxicity study proved that Ligustrosid has minimum neurological deficit and other motoric disturbances (TD 50 neurotoxicity = 1413.63 mg/BW). This dosage is much higher than antiseizure activity dosage of Ligustrosid (290-466 mg/kg, BW i.p). Finally it is concluded that Ligustrosid was antiseizure candidate with no neurological deficit effect.

Keyword : antiseizure, neurotoxicity, ligustrosid, phenytoin, diazepam, ,

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