Evaluation of In Vivo Anti-Nociceptive Effect of Crude Clove (Syzygium Aromaticum) Extracts Obtained Through Cold Ethanol Extraction on Mice

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ABSTRACT

Background: Ethanolic extract of syzygium aromaticum (clove) was obtained to study its analgesic activity. This study was designed for analysis of conventional beneficial anti nociceptive action of syzygium aromticum on animal model by using tail flick method. The extracts of syzygium aromaticum were prepared as high dose (500 mg/kg) & low dose (250 mg/kg) & its action was compared with standard ibuprofen (10 mg/kg).

Objective: The aim of this study was to evaluate the invivo analgesic activity of the extract of syzygium aromaticum in mice by tail flick method.

Methods: Analgesic potency of extract was analyzed on white albino mice, divided into six groups & each group comprises 2 mice. A regular analgesic drug (ibuprofen 10 mg/kg) was set as standard. Normal saline (0.1 ml) was orally administered to the 1st group of animal. Further, ibuprofen (0.1ml) was administered orally to 2nd group of animal. Low dose (250mg/kg) & high dose (500mg/kg) of extract syzygium aromaticum were orally administered (0.1ml) to groups III & IV respectively. A combination of drugs was fixed as low dose of extract (250 mg/kg) with standard (ibuprofen) & high dose of extract (500 mg/kg) with standard (ibuprofen); these combinations were administered orally (0.1ml) to group V & group VI respectively. After 30 minutes of drug administration the tails of the animals were dipped into water bath one after the other to perceive the latency time. This process was repeated after every 30 minutes' interval for 2 hours.

Results: The results of pharmacological tests performed in this study suggest that only the combination of extract & standard showed intense significant response statistically on 90 minutes. Precisely extract with high doses gave profound anti nociceptive activity among all combinations in animal model. The entire analgesic activities have been further shown graphically in this article.

Conclusion: The analysis concludes the use of syzygium aromaticum at high doses is safe & effective. As it showed profound result by suppressing the pain receptors. Hence this study proves the validation of in vivo use of syzygium aromaticum (clove) extract because of its analgesic activity.