Interactions in the antinociceptive effect of tramadol in mice: An isobolographic analysis

Pinardi, Gianni

Pelissier, Teresa

Miranda, Hugo F.

Tramadol is a widely-used analgesic for pre- and post-operative pain which has a different pharmacological profile to that of classical opioids, since it does not induce respiratory depression, constipation, sedation, tolerance or dependence. However, tramadol frequently produces nausea and vomiting as side-effects. In the present study, the interactions between tramadol and several adrenergic and serotonergic compounds with antinociceptive activity were studied by isobolographic analysis. Antinociceptive activity was evaluated using the acetic acid writhing test in mice. Dose-response curves for the antinociceptive effect of tramadol, prazosin, clonidine, xylamine, clomipramine and cyproheptadine were obtained, and ED50S were calculated for isobolographic analysis, which was performed by administration of fixed-ratios of tramadol with each of these drugs, given both systemically and intrathecally. The isobolograms of all combinations tested, either systemically or intrathecally showed