

Antinociceptive effect of clomipramine in monoarthritic rats as revealed by the paw pressure test and the C-fiber-evoked reflex

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The antinociceptive effect of clomipramine was studied in monoarthritic rats by using the paw pressure test and the C-fiber-evoked reflex. Monoarthritis was produced by intra-articular injection of complete Freund's adjuvant into the tibio-tarsal joint. Joint circumference as well as vocalization threshold to graded paw pressure were evaluated weekly during a 14-week period after the intra-articular injection. At week 8, monoarthritic and vehicle-injected control rats were given either clomipramine or saline and both the paw pressure threshold and inhibition of the C-fiber-evoked reflex response were evaluated. Results showed that (i) 1.5, 3.0, and 6.0 mg/kg, i.v. of clomipramine induced significantly greater dose-dependent antinociception to paw pressure testing in the monoarthritic group, as compared to the control one; and (ii) 0.75, 1.5, 3.0, and 6.0 mg/kg, i.v. of clomipramine exerted significantly higher dose-dependent inhibition of the C-reflex activity in monoarthritic rats tha