Preliminary Communication

Anxiolytic-like Effects of Preferential Dopamine D₃ Receptor Agonists in an Animal Model

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The aim of the present study was to examine a potential anxiolytic-like action of (+)-7-hydroxy-2-(di-n-propylamino)tetratin hydrobromide (7-OH-DPAT), a preferential dopamine D₃ receptor agonist, and (N-[4-{4-(2-methoxyphenyl)-1-piperazinyl}butyl]-2-naphthylicarboxamide (BP 897), partial dopamine D₃ receptor agonist. Diazepam was used as a reference compound. The anxiolytic-like effect of those drugs was tested in the conflict drinking test (Vogel test) in male Wistar rats. The obtained results showed that 7-OH-DPAT and BP 897 (like diazepam) induced anxiolytic-like effects in the conflict drinking test. 7-OH-DPAT (0.05 and 0.1 mg/kg), BP 897 (0.5 mg/kg) and diazepam (5 and 10 mg/kg), tested at the effective doses in an animal model, did not affect motor coordination but produced significant reduction in exploratory activity in the open field test. These data suggest that preferential dopamine D₃ agonists may play a role in the therapy of anxiety, however, further studies are necessary to elucidate the mechanism of these actions.

Key words: 7-OH-DPAT, BP 897, conflict drinking test, anxiety, rats

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