Review of the Pharmacological and Clinical Profile of Rimcazole

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ABSTRACT

Rimcazole is a carbazole derivative that acts in part as a σ receptor antagonist. Wellcome Research Laboratories introduced this compound during the 1980s when it was hypothesized to be a novel antipsychotic with an improved side effect profile. However, subsequent clinical trials demonstrated that rimcazole lacked efficacy in schizophrenic patients and it is now primarily used as an experimental tool. In addition to its actions as a σ receptor antagonist, rimcazole also has high affinity for dopamine transporters, and in recent years it has served as a lead compound for the development of novel dopamine transporter ligands. Although rimcazole cannot be considered a selective ligand for σ receptors, the recent development of other selective agonists and antagonists for σ receptors have aided in clarifying the involvement of these receptors in the actions of rimcazole. Many of the physiological and behavioral effects of rimcazole can in fact be ascribed to its action as a σ receptor antagonist, although there are exceptions. Rimcazole is likely to have a continued role in elucidating σ receptor function in either in vitro or in vivo systems where σ receptor-mediated effects can be studied independently of the influence of dopamine and serotonin transporters.

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