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Angiotensin and Sleep: Role of Specific Receptors

Abstract

Although the relationships of the Renin-Angiotensin system (RAS) and the actions of the angiotensin analogs have been reported, the actions of angiotensin on sleep remained unknown. In this study we investigated the effects of intracerebroventricular (icv) injection of Nle1-AngIV (AT4 receptor agonist) and Nle1-Leual3-AngIV (AT4 receptor antagonist) on sleep in rabbits. The AT4 agonist, given in 1nmol and 10nmol doses did not significantly affect any of the sleep parameters measured which included rapid eye movement sleep (REMS), non-rapid eye movement sleep (NREMS) and brain temperature (Tbr). The AT4 antagonist given in a 10nmol dose did not affect any of the sleep parameters measured which included REMS, NREMS and Tbr. Our studies have found that with these analogs and at these doses there was no significant affect on sleep. Though with further studies it may show that with higher doses or the usage of different analogs there may be findings on the relationship between angiotensin and sleep.