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Blockade of different subtypes of α 1-adrenoceptors produces opposite effect on heart chronotropy in newborn rats

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Abstract

We compared the effects of blockade of α 1A-, α 1-, and α 1D-subtypes of α 1- adrenoceptors on the cardiac rhythm in newborn rats. Different responses of the heart were observed after blockade of several subtypes of α 1- adrenoceptors. Administration of WB 4101, a selective blocker of α 1A-adrenoceptors, increased heart rate, while blockade of α 1AD-adrenoceptors with BMY 7378 decelerated of heart rhythm. Blockade of α 1-adrenoceptors with chloroethylclonidine produced no significant effects on heart chronotropy. © 2012 Springer Science+Business Media New York.

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Keywords

α 1-adrenoceptor, heart, ontogeny, rat, sympathetic regulation