

Effects of clonixin on the electrical activity of cardiac pacemaker cells

Morales,

Inostroza,

Salazar,

Paeile,

1. 1. The electrophysiological effects of clonixin, a non-steroidal analgesic, on cardiac pacemaker cells of spontaneously beating frog sinus venosus, were studied by intracellular recording of transmembrane potentials. 2. 2. Results show that clonixin (Clx) between 1×10^{-6} M and 3×10^{-4} M, decreases the OS, APA, V_{max} and frequency of primary and subsidiary cells, however pacemaker cells differ in their sensitivity to Clx. 3. 3. At 2×10^{-6} M, Clx completely blocked the spontaneous beating of primary cells. It is necessary to increase the Clx concentration about two orders of magnitude in order to attain a similar degree of blockade of subsidiary cells. 4. 4. Previous or simultaneous superfusion with atropine does not modify Clx effects, thus a probable cholinergic mechanism of action for Clx is discarded. 5. 5. When Clx concentrations were lower than 5×10^{-4} M, their effects on both types of cells were partially reversed by a 100% increase of external calcium concentration. 6. 6. B