

Calcium channel antagonists and adenosine analogues decrease tolerance to opiate pentazocine and U 50488H

Contreras, E.

Quijada, L.

Germany, A.

Fleckenstein, R.

Hernández, A.

1. A single dose of pentazocine induces cross-tolerance the analgesic effects of the kappa agonist U 50488H. Tolerance is observed by means of the hot plate test or by the i.p. administration of acetic acid 6 or 24 hr after the priming dose, respectively. 2. The administration of the calcium channel antagonists, diltiazem, nifedipine or verapamil, reduces the degree of tolerance as assessed by the hot plate test or acetic acid administration. 3. The adenosine agonist N6-cyclopentyl adenosine significantly reduced the intensity of the process; in contrast, N6-cyclohexyladenosine antagonized the analgesic response to the opiate obscuring its influence on the process. 4. The results are discussed in relation to the interaction of calcium channel function in the analgesic response to the kappa opiates. © 1993.