UDK 612.357.71
Conference paper

EFFECTS OF NICARDIPINE, NIFEDIPINE AND VERAPAMIL ON ACETYLCHOLINE–INDUCED CONTRACTIONS OF DISEASED HUMAN GALLBLADDER: ANTIACETYLCHOLINE ACTION OF DIHYDROPYRIDINE CALCIUM ANTAGONISTS

S.JANKOVIĆ and D.B. BELESLIN
Department of Pharmacology, Faculty of Medicine
34000 Kragujevac and Department of Pharmacology, Faculty of Medicine,
P.O. Box 662, 11000 Beograd, Yugoslavia

Janković, S. and Beleslin, D.B. (1990): *Effects of nicardipine, nifedipine and verapamil on acetylcholine–induced contractions of diseased human gallbladder: antiacetylcholine action of dihydropyridine calcium antagonists.* Iugoslav. Physiol. Pharmacol. Acta, 25,... 279–283.

Inhibitory effects of nicardipine, nifedipine and verapamil on acetylcholine-induced contractions of diseased human gallbladder strips were investigated. Nicardipine (1.3×10^{-8} mol – 1.3×10^{-7} mol) depressed the maximum response without producing a parallel shift of the concentration–response curve for acetylcholine. Nifedipine in smaller concentrations of 1.4×10^{-8} mol did not alter significantly, but in larger concentrations of 1.4×10^{-7} mol depressed the maximum response without causing a parallel shift of the concentration–response curve for acetylcholine. On the other hand, the concentration–response curve for acetylcholine was virtually not affected by verapamil (1.2×10^{-7} mol). These results suggest that the three calcium antagonists differ in their ability to affect acetylcholine–induced contractions. In this respect, the dihydropyridine calcium antagonists are much more potent than verapamil.

Key words: Human gallbladder – Acetylcholine – Calcium antagonists

INTRODUCTION

There is increasing evidence that calcium antagonists, apart from their action on voltage–dependent calcium channels, inhibit muscarinic, alpha–adrener-