

INHIBITORY EFFECTS OF VERAPAMIL, NIFEDIPINE AND NICARDIPINE ON HISTAMINE-INDUCED CONTRACTIONS OF DISEASED GALLBLADDER: ANTIHISTAMINE ACTION OF 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 Belgrade, Yugoslavia

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The inhibitory effects of the calcium antagonists, verapamil, nifedipine and nicardipine on contractile responses of the diseased human gallbladder strips were studied. Verapamil (1.4×10^{-8} mol), nifedipine (1.4×10^{-8} mol) and nicardipine (1.3×10^{-8} mol) depressed the maximum response of the gallbladder to histamine without causing a parallel shift of the concentration-response curve for histamine. Their rank order of potency is verapamil > nifedipine > nicardipine. Thus, the calcium antagonists which influence the motor activity of the human biliary tract due to the release of histamine could have a therapeutic use associated with cholecystitis.

Key words: Human gallbladder – Histamine – Calcium antagonists – Contractions – Inhibition – Cholecystitis

INTRODUCTION

It seems likely that calcium antagonists may exert a major part of their action at receptor site/s. In particular, there is considerable evidence that calcium antagonists inhibit muscarinic, alpha adrenergic and opioid receptors in the brain as well as in the peripheral organs and tissues (Fairhurst *et al.*, 1980; Atlas

