Effect of ciprofloxacin on haloperidol induced catalepsy in albino mice

Vijay Kumar

Kasturba Medical College,Mangalore

E-mail: kapoorsss88@gmail.com

Introduction

Fluoroquinolones are widely used antimicrobial agents for the treatment of various infections. These agents produce clinically significant excitatory side effects on central nervous system. and are attributed to the inhibition of g-aminobutyricacid (GABA) binding to the GABA- A receptor. GABA is involved in the regulation of dopaminergic neuronal activity within the forebrain and nigro straiatal system. Evidence indicate that the GABA-mimetic drugs potentiate neuroleptic-induced catalepsy. In this context as there are no evidence about the effects of fluroquinolones on haloperidol induced catalepsy, the present study was undertaken to evaluate the effects of ciprofloxacin, a fluroquinolone on haloperidol induced catalepsy in mice.

Objective

To study the effect of acute administration of ciprofloxacin on haloperidol induced catalepsy in mice.

Material and Methods

Thirty albino mice weighing 25-30g were divided into five groups with six animals in each. All animals received haloperidol (1mg/kg) 30 minutes after the administration of either normal saline (10ml/kg, Group I) or trihexyphendyl (10mg/kg,Group II) or ciprofloxacin (12.5, 25 ,50mg/kg Groups III,IV and V respectively). Catalepsy was measured as the time the animal maintained an imposed position with both front limbs raised and resting on a four centimeter high wooden bar.

Results

Acute administration of ciprofloxacin at all the doses tested significantly reduced the duration of haloperidol catalepsy at the end of 60 and 90 minutes observations when compare to vehicle pretreated group.This reduction was comparable to that produced by the standard drug, trihexiphendy l.