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Diuretic and natriuretic effect of luteolin in normotensive and hypertensive rats: Role of muscarinic acetylcholine receptors

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Diuretic and natriuretic effect of luteolin in normotensive and hypertensive rats: Role of muscarinic acetylcholine receptors

Abstract

Background

Luteolin is a very common phenolic compound found in a wide variety of natural products. Although several biological properties have already been described regarding the beneficial effect of luteolin in the cardiovascular and renal system, no scientific research explored its potential effect as a diuretic agent in experimental trials.

Methods

Groups of male normotensive (NTR) and spontaneously hypertensive rats (SHR) were orally treated with vehicle, hydrochlorothiazide or luteolin. In another experimental set, in order to verify the possible mechanisms of luteolin-induced diuresis, NTR were treated with vehicle, hydrochlorothiazide, amiloride, L-NAME, indomethacin or atropine, 1 hour before receiving luteolin. The cumulative urine volume, electrolytes excretion, pH and osmolality were measured at the end of the experiment (after 8 hours).