

Antihypertensive effect of corilagin in the rat

Cheng JT;Lin TC and Hsu FL

Abstract

The antihypertensive effect of corilagin, one of the ellagitannins purified from the seeds of *Euphoria longana* Lam. (Sapindaceae), was investigated in the spontaneously hypertensive rat (SHR). Administration of corilagin into conscious SHR at 5 mg/kg produced an antihypertensive effect equivalent to that induced by 1 mg/kg of guanethidine. This dose-dependent hypotensive effect was comparable with that observed in anesthetized SHR animals. Corilagin did not modify the baroreflex sensitivity in phenylephrine-challenged SHR. Corilagin reduced plasma noradrenaline in a dose-dependent fashion, an effect that was maintained in adrenalectomized rats. Failure of the antagonists for alpha2-adrenoceptors, idazoxan and yohimbine, as well as for dopamine receptors, haloperidol and domperidone, to reverse the antihypertensive actions of corilagin ruled out the participation of these receptors. Moreover, corilagin attenuated the pressor effects of methoxamine and Bay K8644 to a similar degree, indicating the direct effect of corilagin on vascular activity in rats. These results suggest that corilagin possesses the ability to lower blood pressure through the reduction of noradrenaline release and (or) direct vasorelaxation.