Cardiovascular effects of mycelium extract of Ganoderma lucidum: inhibition of sympathetic outflow as a mechanism of its hypotensive action.

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Source

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Abstract

In an effort to understand the mechanism of cardiovascular actions of Ganoderma lucidum which was cultivated in Korea, the mycelium was isolated for a large-scale culture. Water extract of the mycelia was evaluated for its cardiovascular activity in anesthetized rabbits and rats. The left femoral artery and vein were cannulated for the measurement of arterial pressure and subsequent delivery of drugs. The left kidney was exposed retroperitoneally and a branch of the renal nerve was used to integrate renal efferent or afferent nerve activities. The extract decreased systolic and diastolic blood pressure, which was accompanied by an inhibition of renal efferent sympathetic nerve activity. The extract did not decrease heart rate in these animals, although there was clear hypotension in the extract dose dependent manner. This suggests that the hypotension induced by the treatment of the extract was secondary to the primary effect of the extract in the central nerve system, which suppressed the sympathetic outflow. Therefore we concluded that the mechanism of hypotensive action of Ganoderma lucidum was due to its central inhibition of sympathetic nerve activity.

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