Pharmacologyonline
Volume ٢, ٢٠٠٩, Pages ٦٥١-٦٥٥

Protective effect of Salvia leriifolia Benth. root aqueous and ethanolic extracts on renal ischemia-reperfusion in uninephrectomized wistar male rats

Hosseinzadeh, H.[a] , Motamedshariaty, V.S.[b], Ziaee, S.T.[c]
[a] Department of Pharmacodynamy and Toxicology, Pharmaceutical Research Center, **Mashhad University** of **Medical Sciences**, P.O. Box ١٣٦٥-٩١٧٧٥, **Mashhad**, I.R, Iran
[b] Pharmaceutical Research Center, **Mashhad University** of **Medical Sciences**, **Mashhad**, I. R., Iran
[c] Department of Pharmacodynamy and Toxicology, School of Pharmacy, **Mashhad University** of **Medical Sciences**, **Mashhad**, I. R, Iran

View references (٢٩)

Abstract
The effect of Salvia leriifolia Benth. root aqueous and ethanolic extracts on oxidative stress, renal dysfunction was evaluated during the renal ischemia-reperfusion in uninephrectomized rats. The left kidney was exposed to warm ischemia for ٦٠ min followed by reperfusion for ٩٠ min. The aqueous and ethanolic extracts of S. leriifolia (٠,٠١, ٠. ٢ and ٠,٤ g/kg) were injected intraperitoneally prior to induction of ischemia. Normal saline was injected to control group and a sham group that did not have ischemia-reperfusion. The aqueous and ethanolic extracts pretreatment resulted in a significant reduction in the free radical-mediated lipid peroxidation as indicated by a decrease in the MDA levels, at various dose levels (except ٠,١ mg/kg for aqueous extract). The aqueous (٠,٢ and ٠,٤ mg/kg) and ethanolic (٠,٤ mg/kg) extracts pretreatment increased antioxidant power (FRAP value) of kidney homogenate samples. Both extracts pretreatment caused a significant and dose dependently elevation in total thiol concentration, as compared with control group. This study showed that the aqueous and ethanolic extracts of S. leriifolia root may be useful for the prevention of renal ischemia-reperfusion-induced oxidative injury in rats. These effects may have been mediated, at least partially, via antioxidant capacity.

Reaxys Database Information

|

Author keywords
Ischemia-reperfusion kidney injury; Protein oxidation; Renal failure; Salvia leriifolia Benth. lipid peroxidation

Indexed Keywords
EMTREE drug terms: ٣,٤ methylenedioxyamphetamine; alcohol; antioxidant; free radical; plant extract; Salvia leriifolia extract; thiol; unclassified drug; water

EMTREE medical terms: animal experiment; animal model; animal tissue; article; controlled study; dose response; drug mechanism; drug screening; kidney dysfunction; kidney ischemia; kidney parenchyma; lipid peroxidation; male; nonhuman; oxidative stress; plant root; rat; renal protection; reperfusion injury; Salvia; Salvia leriifolia; uninephrectomy

Chemicals and CAS Registry Numbers: ٣,٤ methylenedioxyamphetamine, ٤٧٦٤-١٧-٤; alcohol, ٦٤-١٧-٥; water, ٧٧٣٢-١٨-٥

ISSN: ١٨٢٧٨٦٢٠ **Source Type:** Journal **Original language:** English
Document Type: Article