Antihyperlipidemic activity of Allium chinense bulbs
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ABSTRACT
Allium chinense is a medicinal plant and nutritional food commonly used in Eastern Asia. In this study, we investigated the in vitro antioxidant activity (scavenging of α, α-diphenyl-β-picrylhydrazyl free radical, total phenol content, reducing power, and total antioxidant activity) and constituents of various extracts from A. chinense. Moreover, we also studied the in vivo hypolipidemic effects of extracts on high-fat-diet Wistar rats. Ethanol extracts from A. chinense showed notable antioxidant activity, and its high-dose essential-oil extract both significantly reduced serum and hepatic total cholesterol, triglyceride, and low-density lipoprotein levels and increased serum high-density lipoprotein levels in high-fat-diet Wistar rats compared with those observed following treatment with the control drug probucol. Additionally, visceral fat in high-fat-diet Wistar rats was reduced. Furthermore, groups with high doses of essential-oil and residue extracts showed protective effects associated with histopathological liver alteration. These results suggested that A. chinense is a valuable plant worthy of further investigation as a potential dietary supplement or botanical drug.

Keywords: Allium Chinense, antihyperlipidemic, antioxidant, essential oil, flavonoid

REFERENCES