Hypolipidemic effect of autumn olive berry in mice fed a high-fat, high-sucrose diet

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Autumn olive (*Elaeagnus umbellata* Thunb.) is a good source of phytochemicals including lycopene [1,2]. It was reported that lycopene exerted antihyperlipidemic effect in atherosclerosis-induced rats [3]. The aim of this study was to investigate the hypolipidemic effect of autumn olive berry (AOB) in mice fed a high-fat, high-sucrose (HFHS) diet. Seven-week-old male C57BL/6J mice were fed a basal diet, a HFHS diet, or the HFHS diet containing 0.4% AOB extract (low AOB, LAOB) or 0.8% AOB extract (high AOB, HAOB) for 12 weeks. After sacrifice, serum triglyceride, cholesterol, LDL-cholesterol, and HDL-cholesterol were measured. Serum triglyceride, cholesterol, and LDL-cholesterol levels of HFHS group were significantly elevated compared with the control group ($p < 0.05$). Consumption of LAOB or HAOB significantly reduced serum triglyceride levels compared with the HFHS group ($p < 0.05$). Serum cholesterol and LDL-cholesterol levels were significantly lower in the HAOB group than in the HFHS group. Serum cholesterol and LDL-cholesterol levels of the LAOB groups were not significantly different from those of the HAOB and HFHS groups. Serum HDL-cholesterol levels of the four groups were not significantly different. These results suggest that AOB could have hypolipidemic effect in mice fed a HFHS diet.

Acknowledgements

References
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[3] Kumar R et al. *Pharmacognosy Res*. 2017; 9:161–167.