

ABSTRACT

Background: Atherosclerosis was caused by elevated of total cholesterol levels serum in the blood plasm. Atherosclerosis can be formed in coronary artery so that it can be a risk factor of coronary heart disease. This study aimed to examine the effectivity of *Amaranthus tricolor* Linn. roots extract in decreasing total cholesterol level in *Rattus norvegicus* with hypercholesterolemia condition. **Methods:** A total of 38 rats were divided into four groups control, high lipid diet, high lipid diet + watery extract of *Amaranthus tricolor* Linn. roots at dosage 400 mg/kg body weight, and high lipid diet + ethanolic extract of *Amaranthus tricolor* Linn. roots at dosage 400 mg/kg body weight. The control group received standard diet for 28 days. The high lipid diet groups received standard diet plus egg yolk and pig fat for 28 days by oral route. Extract of *Amaranthus tricolor* Linn. roots have given during last 7 days. After 28 days, rats were anesthetized with ether for collection of blood plasm by cardiac puncture. Analysis of profil total cholesterol from whole blood plasm have been done with *Cholesterol Oxidase-Peroxidase Aminoantipyrine Phenol* (CHOD-PAP) method. **Results:** From the results of *Kruskal-Wallis* test was concluded that there were not significant between-group differences in total cholesterol levels ($p=0,453$). Watery and ethanolic extract of *Amaranthus tricolor* Linn. roots at dosage 400 mg/kg body weight not significantly decreased total cholesterol levels but have a tendency to decrease total cholesterol levels. **Conclusion:** Watery and ethanolic extract of *Amaranthus tricolor* Linn. roots at dosage 400 mg/kg body weight have a beneficial effect on decrease of total cholesterol levels in rats on hypercholesterolemia condition but not significant.

Key words: *Amaranthus tricolor* Linn., total cholesterol, hypercholesterolemia