The effect of Astragalus armatus on Antioxidant enzymes in Methionine induced Hyperhomocysteinemia in mice.

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Hyperhomocysteinemia (HHcy) defined by the increase in the homocysteine (Hcy) level in the plasma (1), is related with cardiovascular disease, atherosclerosis and reactive oxygen (2). Our research aims to determine the protective effect of the extract of *Astragalus armatus* on antioxidant enzymes in methionine induced Hyperhomocysteinemia in mice, which has risk factor of cardiovascular diseases, we are looking for whether HHcy leads to hyperlipidemia and endogenous oxidative stress, and the treatment with the extract of medicinal plant *Astragalus armatus* could correct these alterations induced by high dose of L-methionine. After 21 days of treatments, Hcy concentration, hepatic antioxidant status were determined. Consumption of high methionine diet resulted in a significant increase in plasma Hcy. Furthermore, we detected a decrease in glutathione reduced (GSH) and catalase (CAT) activities. While the administration of *Astragalus armatus* extract with L-methionine caused: a decrease in Hcy concentration and an increase in GSH and CAT activities. Our data showed that *Astragalus armatus* extract is effective in: decreasing plasma Hcy levels and reducing oxidative stress by increasing antioxidant status in mice fed a diet rich in L-methionine.

Mots clés : Hyperhomocysteinemia, *Astragalus armatus,* Antioxidant enzymes.