Anti herpes simplex-1 activity of a standard extract of Zataria multiflora Boiss.

Arabzadeh AM, Ansari-Dogaheh M, Sharififar F, Shakibaie M, Heidarbeigi M.

Source
Department of Microbiology, Faculty of Medicine, Kerman University of Medical Sciences, Kerman, Iran.

Abstract
In Rosmarinic Acid (RA) is a phenolic acid which has many biological activities such as antioxidant, anti-inflammatory and anti viral effects. In the present study, we have studied the anti Herpes simplex type 1 (HSV-1) effect of methanolic extract of Zataria multiflora which has been standardized on the basis of RA content. Methanolic extract of Zataria multiflora was prepared by maceration method. RA content of plant extract was measured by spectrophotometry method using the calibration curve of RA. Maximum non Toxic Concentration (MNTC) of the plant was determined by neutral red method. MNTC and lower serial dilutions of extract were examined in vitro on vero cells for their effect against HSV-1 using a plaque reduction assay. Acyclovir was used as positive control. Time-dependent antiviral effect of Z. multiflora was studied by adding the extract to HSV-1 infected vero cells at different stages of infection. The percentage of RA was determined as 2.2% in Z. multiflora. This plant was effective in all used concentrations and significantly reduced plaque formation up to 100% at concentrations of 800 and 1000 microg mL(-1). Clearly Z. multiflora revealed both a time and concentration inhibition. It seems that the presence of rosmarinic acid would be a determining factor for anti HSV activity of Z. multiflora.

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