Effects of Polygonum Cuspidatum Containing Resveratrol on Inflammation in Male Professional Basketball Players

Hoda Sadat Zahedi¹,², Shima Jazayeri¹,², Reza Ghiasvand³, Mahmoud Djalali²,⁴, Mohammad Reza Eshraghian⁵

ABSTRACT

Background: Exercise can lead to acute oxidative stress, which can result in oxidative damage and induce inflammation. Resveratrol may reduce the levels of inflammatory cytokines. Thus, we investigated the effects of this compound on the plasma levels of tumor necrosis factor-α (TNF-α) and interleukin 6 (IL-6) in male professional basketball players.

Methods: Twenty healthy male professional basketball players were randomized into two groups (10 each). For 6 weeks, they received daily either 200 mg of polygonum cuspidatum extract (PCE) standardized to contain 20% trans-resveratrol equivalent to 40 mg trans-resveratrol or placebo. Indices of inflammation were measured before and after 6 weeks of supplementation.

Results: There was a significant reduction in plasma levels of TNF-α and IL-6 after 6 weeks of supplementation; while no change was observed in these markers in the control group.

Conclusions: Present study shows that 6 weeks of PCE containing resveratrol supplementation reduces the inflammation in male professional basketball players.

Keywords: Cytokines, interleukin-6, inflammation, polygonum cuspidatum, resveratrol, tumor necrosis factor-α

¹Department of Clinical Nutrition, School of Nutrition and Dietetics, Tehran University of Medical Sciences, Iran, ²Department of Nutrition and Biochemistry, School of Public Health, Tehran University of Medical Sciences, Iran, ³Department of Nutrition, School of Health, Isfahan University of Medical Sciences, Iran, ⁴Department of Cellular and Molecular Nutrition, School of Nutrition and Dietetics, Tehran University of Medical Sciences, Iran, ⁵Department of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences and Health Services, Tehran, Iran

Correspondence to:
Dr. Shima Jazayeri,
Department of Clinical Nutrition,
School of Nutrition and Dietetics,
Tehran University of Medical Sciences,
Tehran, Iran.
E-mail: sh_jazayeri@tums.ac.ir

Date of Submission: Jan 21, 2012
Date of Acceptance: Apr 09, 2013