The Antioxidant Effects of Flavonoids and non Flavonoid Part Extracted from Ginger (Zingiber Officinale) Roots.

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ABSTRACT

The extraction of Flavonoids from dried ginger (Zingiber officinale Ros.) roots in addition of non-flavonoids parts (oils and defatted) were studied against H2O2 induced oxidative stress in the serum of male rats for 15 day.

Fifty male rats with age of 3-4 months and weight of 225- 300 g were divided into 5 groups: group (1): control group received drinking tap water and ideal diet, group (2): received 0.5% H2O2 in drinking tap water, group (3): received 0.5% H2O2 and oral dose of 15 mg/ kg of BW. flavonoids once daily, group (4): received 0.5% H2O2 and oral dose of 30 mg/ kg BW flavonoids once daily. Group (5): received 0.5% H2O2 and the experimental diet (50 g non-flavonoids part / kg diet).

H2O2 treated group showed elevation in serum cholesterol, malondialdehyde (MDA), peroxynitrite radical levels and reduction in glutathione (GSH), vit C, albumin, calcium, and phosphorus levels compared with the control group (p ≤ 0.05). Treatment with ginger extracts counteracted the oxidative stress induced by H2O2 by reducing the levels of cholesterol, MDA and peroxynitrite and enhancing the levels of GSH, vit C, albumin and calcium compared with the H2O2 treated group (p ≤ 0.05). Treatment with non flavonoids part, by means of experimental diet, showed decreasing in the MDA, peroxynitrite, phosphate levels and increasing in vit C level compared with the H2O2 treated group (p ≤ 0.05). The results of the present study provided the protective effects of the ginger extract by increasing antioxidant defense and suppression free radicals production in the serum.

Keywords: ginger, flavonoids, oxidative stress, antioxidants.
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Comparison of the Antioxidant Activity of Some Plants Used by Women as a Dietary Supplement

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Antioxidant activity was evaluated in some plants used by women as a dietary supplement. The extracts were prepared from the pulverized plant materials and used for in vitro assays.

Results:

The extracts showed significant antioxidant activity, with the highest activity observed in the extracts from the species used in the study. The results indicated that these plants could be a potential source of natural antioxidants.

Conclusion:

The extracts from the plants used as dietary supplements showed promising antioxidant activity, which could be explored further for their potential applications in dietary supplements and other related fields.