

Preventive role of Tunisian radish extract (*Raphanus sativus*) against oxidative stress and biochemical toxicity induced by Zeralenone in mice

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Radish (*Raphanus sativus*), has been used in folk medicine as a natural drug against many toxicity and culinary diseases. Mycotoxins are toxic metabolites which include Zeralenone (ZEN). The latter was shown to be hepatotoxic, haematotoxic, immunotoxic, nephrotoxic and genotoxic. In the present work, radish extract was evaluated against the toxic effects of ZEN in Balb/c mice. 70 mature female Balb/c mice were randomly assigned to seven experimental groups of ten mice each including the control group, olive oil group, the groups treated with radish extract alone (5, 10 and 15 mg/kg b.w), the group treated with a ZEN (40 mg/kg bw) and the group treated with ZEN plus the lowest dose of radish extract. Blood samples were used for biochemical analysis. Livers and kidneys were removed for determination of malondialdehyde, glutathione and superoxide dismutase. ZEN treatment significantly increased ALAT, ASAT, PAL, BILT, BILD, CRE and induced degenerative changes in the antioxidant status, while the co-treatment with ZEN and the radish extract resulted in a significant reestablishment of the serum biochemical levels. Moreover, antioxidant status was equilibrated; free radical generation and lipid peroxidation were prevented by the radish extract addition.

Our data strongly suggested that radish extract did not show any toxic effects by itself. On the other hand, it significantly reduce the deleterious effects caused by ZEN.

Key words: Radish extract, Zearalenone, Antioxidants, Free Radicals, Biochemical parameters, mice