

The Potential Beneficial Role of Parsley (Apigenin Rich Herb) on Prednisolone-Induced Osteoporosis in Rats

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Abstract

This study was carried out to evaluate and compare the effect of parsley (apigenin flavone rich herb), to the effect of apigenin on prednisolone-induced osteoporosis in rats. Four groups were performed in Wistar strain rats, each consisted of ten rats. Group I was considered a control group. In groups 2,3 and 4, prednisolone (10mg/kg), was injected to rats intramuscularly three times a week for 6 weeks to induce osteoporosis. Parsley leaves were prepared by washing, drying then blending with the rats' diet in a percent of 5gm% from the diet weight. This diet was administered to 3rd group animals. The 4th group was given apigenin orally in a dose of 10mg/kg 3times weekly. Calcium, phosphorus, and alkaline phosphatase serum levels were estimated at the end of experiment and femur specimens were obtained for histological examination. Results showed that prednisolone injections caused significant reductions in calcium, and phosphorus, significant increases in alkaline phosphatase serum levels in the 2nd untreated model group with sings of osteoporosis observed histologically in rats femurs. Oral administration of apigenin or a diet rich in parsley markedly reversed these changes to almost normal values The results of the two treated groups were almost similar. These re-sults suggested that either parsley

leaves rich diet or apigenin administration might have a potential prophylactic role against bone loss induced by corticosteroid treatment.
Key Words: Osteoporosis – Calcium – Bone – Alkaline phosphatase – Apigenin – Parsley.

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