**Abstract**

Aim and objective of the study:

Tea beverage consumption varies among the populations of different countries. In

some parts of the country, tea is consumed with or without milk. Hence aimed to

evaluate osteoporotic and ulcerogenic effect of Camellia sinensis alone and with milk

and its antioxidant effect on chronic treatment in albino Wistar rats.

Methodology:

Four different types of tea preparations with 2 different doses such as 125, 250 mg/ml

HWE; 125, 250 mg/ml BWE; 125, 250 mg/ml HME and 125, 250 mg/ml BME were

freshly prepared and administered for 110 days. On 35th day of administration,

antioxidant activity was evaluated by estimating reduced glutathione, catalase and

lipid peroxidation in serum. Osteoporosis was estimated on 75th day of administration

by estimating the levels of calcium, creatinine, inorganic phosphate, hydroxyproline,

calcium creatinine ratio of urine and serum alkaline phosphatase. On 110th,

ulcerogenesis was evaluated by estimating gastric juice pH, volume, total and free

acidity, protein, hexoses, pepsin and ulcer score.

Result:

Our results are not confirmed its antioxidant activity. Four tea preparations

administered groups showed significant alterations in the biochemical markers of

bone turn over and also ulcer inducing abilities by producing ulcer lesions and by

increasing pepsin and protein output of gastric juice.

Conclusion:

Administration of various black tea preparations on empty stomach might prone to

induce gastric ulcers and also showed alteration in biochemical marker of bone

turnover which indicate that there is some extent of effect on bone causing collagen

degradation and may prone to develop osteoporosis in rats. No much clear cut

antioxidant effect observed in rats with any type of tea preparations. Effect observed

was found to be independent of dose and method of preparation of tea.

Keywords: Camellia sinensis, antioxidant, osteoporosis and ulcerogenesis.