Abstract

This study examined the effects of NaF on buccal mucosa from female and male rats. Animals were divided by gender into three groups (15 rats/group): a) control group, b) group that received 1 ppm of NaF added to drinking water and c) group that received 50 ppm of NaF added to drinking water. Five rats from each group were sacrificing weekly up to four weeks. Buccal mucosa was isolated. Malondialdehyde (MDA) and the activity of the antioxidant enzymes superoxide dismutase (SOD) and catalase were determined. Although none of the animals presented signs of fluoride intoxication, our results show that buccal mucosa from female and male rats presents a significant increase in MDA concentration after four weeks of treatment with 50 ppm of NaF. This latter dose of NaF increases significantly the activity of catalase and SOD at two weeks of treatment in both gender of rats. The treatment with NaF produces changes in the buccal mucosa indicative of an oxidative stress.

Keywords

catalase, antioxidant enzymes, sodium fluoride, malondialdehyde, buccal mucosa, superoxide dismutase