

EFFECT OF SODIUM FLUORIDE OR SODIUM MONOFLUORPHOSPHATE TREATMENT IN AN ALVEOLAR BONE HEALING EXPERIMENTAL MODEL

Depending on the dose and the way of administration, fluoride (F-) produces different physico-chemicals and biological effects on bone tissue. The F- bioavailability is higher when it is administered as sodium monofluorophosphate (MFP) compared to sodium fluoride (NaF) at equivalent doses. **OBJECTIVE:** to compare the effect produced by F- administration in the form of NaF or MFP, post first molar extraction, on biochemical markers of phosphocalcic metabolism and morphometric parameters of mandibular growth. **METHODS:** the first right lower molar of twelve 21-days-old male Wistar rats was extracted under anesthesia. Then, rats were divided into three experimental groups which received distilled water (control) or a solution containing 80 mmol of NaF or MFP per day during 21 days. The treatment was administered by orogastric catheter. After treatment, animals were euthanized by cervical dislocation and mandibles were collected. Plasma Ca and P levels and alkaline phosphatase (ALP) activity were determined. Morphometric parameters of mandible growth were measured on digital radiographic images using the software Romexis. Data were analyzed by ANOVA and Bonferroni's post hoc test. **RESULTS:** Phosphatemia increased in animals under F- treatment respect control animals ($p < 0,05$); an increase in ALP activity was observed only in NaF group compared to control ($p < 0,05$). The F- treatment, did not affect mandible growth parameters. **CONCLUSIONS:** the administration of F-, as NaF or MFP, by orogastric catheter after first molar extraction, affected some plasma markers related with phosphocalcic metabolism, effect more pronounced in NaF group.

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