

68. (286) LOCAL EFFECTS OF LOW DOSES OF PTH 1-34 ON EXPERIMENTAL PERIODONTITIS

Susana Noemi Zeni (*Osteology and Bone Metabolism Lab. INIGEM. School of Biochemistry. Clinical Hospital. (UBA/CONICET)*), Mario Ricardo Davison (*Dentistry School. Rio Negro National University.*), Nicolas L Bidevich (*Dentistry School. Rio Negro National University.*), Mariana Preliasco (*Dentistry School. Rio Negro National University.*), Marina Bonanno (*Osteology and Bone Metabolism Lab. INIGEM. School of Biochemistry. Clinical Hospital. (UBA/CONICET)*)
INIGEM (UBA/CONICET)

Periodontitis is a highly prevalent, chronic disease that induces a progressive bone resorption. Intermittent PTH administration has anabolic and anti-inflammatory effects, two properties necessary to achieve bone recovery. Periodontal disease can be experimentally induced in rats in few days, via cotton ligatures placement in the gingival sulcus around the molar teeth, that increases biofilm accumulation and disruption of the gingival epithelium, enhancing osteoclastogenesis and bone loss. We investigated whether intermittent administration of a low dose of PTH 1-34 in rats would block the alveolar bone loss observed when the ligature model of periodontitis was used. Periodontitis was induced in 16 female Wistar rats (221±15g) under light anesthesia. Ligature was replaced every 4 days. Rats were randomly divided in two groups and subcutaneously injected every 48 hs for 18 ds. with: G1 saline solution and G2 1.2ug PTH1-34. Eight rats were left unligated as healthy control. After killed hemimandibles were extracted and fixed in formalin buffer for histologic analysis of tibia subchondral bone volume (BV/TV%), alveolar bone BV/TV% and periodontal space height (PSH). Results: tibia BV/TV%: C 38.77±2.59; G1 38.29±3.9 and G2 37.75±1.45; alveolar bone BV/TV% C 50.3±3.6c; G1 35.6±4.3a and G2 42.0±1.4b; PSH (mm): C: 0.196±0.057a; G1 0.809±0.115b and G2: 0.706±0.065c. Different letters show a p<0.05. The results evidenced no systemic effect of PTH treatment on the tibia. Alveolar bone composed by trabecular bone showed a significant recovery. The PSH evidenced a little recovery but a greater percentage of osteoid tissue as compared to untreated rats. Conclusion: Intermittent low doses of PTH administration diminishes alveolar bone loss, but increases osteoid formation, suggesting that intermittent PTH administration attenuates periodontitis alveolar bone loss by the induction of tissue regeneration. Grant of Rio Negro National University. PI UNRN 40-A-467.