

论文

T1DM、T2DM糖尿病大鼠牙槽骨骨密度变化的相关性实验研究

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摘要:

目的 比较1型、2型糖尿病大鼠牙槽骨骨密度的变化。方法 腹腔注射链脲佐菌素制备1型、2型糖尿病大鼠模型,应用定量放免法、酶联免疫吸附法检测其血糖、血脂、胰岛素和骨代谢血清标记指标,采用双能X线照射法测量右侧下颌牙槽骨的骨密度。结果 1型、2型糖尿病组正常对照大鼠的下颌牙槽骨骨密度无统计学差异(P>0.05),2型糖尿病大鼠下颌牙槽骨发生了骨质疏松(P<0.05),1型糖尿病治疗组大鼠下颌牙槽骨未发生骨质疏松(P>0.05),1型糖尿病未治疗组大鼠发生了骨质疏松(P<0.05)。2型糖尿病大鼠下颌牙槽骨骨密度高于1型糖尿病未治疗组(P<0.05),与1型糖尿病治疗组大鼠下颌牙槽骨骨密度接近(P>0.05)。结论 2型糖尿病大鼠下颌牙槽骨骨密度高于1型糖尿病大鼠下颌牙槽骨,控制好血糖浓度可以预防骨质疏松。

关键词: 1型糖尿病; 2型糖尿病; 下颌牙槽骨; 骨密度

Changes of the mineral density of the alveolar bone between T1DM and T2DM rats

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Abstract:

Objective To compare the changes of the mineral density of the alveolar bone in Type 1 and Type 2 diabetic rats. Methods Models of diabetic rats were established by peritoneal injection of STZ. Blood glucose, lipid, and serum insulin, indicators of bone metabolism were determined by quantitative radioimmunoassay, enzyme-linked immunosorbent assay, while the bone mineral density of the right alveolar bone was measured by the dual energy X-ray irradiation method. Results The changes of the mineral density alveolar bone of the mandible in normal control rats was similar(P>0.05). Osteoporosis did not happen to treated Type 1 diabetic rats(P>0.05), but it happened to untreated Type 2 diabetic and Type 1 diabetic rats(P<0.05). The changes of the mineral density of the alveolar bone of mandible in treated Type 2 diabetic and Type 1 diabetic rats were similar(P>0.05). Conclusion The mineral density of the alveolar bone of mandible in untreated Type 2 diabetic rats was higher than that in Type 1 diabetic rats. Good control of blood glucose levels can prevent osteoporosis.

Keywords: Type 1 diabetes mellitus; Type 2 diabetes mellitus; Alveolar bone of mandible; Bone mineral density

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