Open Osteotomy of ulna as a Model For Fracture Healing Studies in Rabbits

Abstract

Objective: The aim of the study is to present a model for fractures healing studies in experimental animal (rabbits) without use of external splintage or internal fixation.

Material and Methods: Six young locally breeded New Zealand male rabbits were used in this study, the study conducted in animal house in college of medicine at November and December 2009. Surgical fracture (osteotomy) induced operatively in right ulna under general anesthesia by a hand saw. At the end of fifth weeks, the animals' scarified and the specimens taken for radiological, computerized tomography (CT) scan densimetry and histological examination carried out for bone healing in site of osteotomy

Results: All bone osteotomy united at end of fifth weeks macroscopically and radiologically. There was no significant difference in serum calcium, serum phosphate, and serum alkaline phosphatase preoperatively and at end of fifth weeks. The callus density was measured in site of osteotomy by CT scan densimetry and its mean was 302 ± 142. The histological examination of the bone at site of osteotomy show healing with woven bone predominantly with some lamellar bone and cartilage.

Conclusion: The present study demonstrated that the ulnar osteotomy without use of external splintage or internal fixation model is a new, easy to perform and can be used as a model for fractures healing studies.

المؤتمر الجويبي الذهبي للكمية طب الموصل 3 نيسان 2014

اسم الباحث: أ.م.د. محمود عبد سليمان الجملي

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