

Bone repair using calcium sulfate in bone defects of rabbit tibiae [Reparación Ósea utilizando sulfato de calcio en defectos Óseos de tibia de conejos]

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Bone regeneration in the alveolar process and dental implant are widely used and there are a lot of different products. The aim of this research was to know the bone reparation associated to bone substitute with calcium sulfate and a biological membrane in created defects in rabbit tibiae. Were selected 12 rabbit between 3 and 6 month to be operated; using previous anesthesia protocols was do it a surgical defect in the right and left tibiae with 2.6 mm diameter; four groups were created: group I with blood clot fill, group II with blood clot fill plus biological membrane, group III with calcium sulfate and group IV with calcium sulfate plus biological membrane. The euthanasia was made in 21 and 42 days before surgery and was obtained histological plate using hematoxillin and eosin. The histomorphometry was made and statistical analysis using ANOVA and Turkey test with $p < 0.05$ to obtain statistical differences. Were observed in the all created defects a regular bone reparation; the group I and II, with blood clot, showed a minor bone reparation than group III and IV with calcium sulfate, but these last one show an important inflammatory process; the group IV presented the better results at 21 and 42 euthanasia days in term of bone formation. It's conclude that calcium sulfate can be used in bone reparation of minor defects and the biological membrane can be used in guide bone regeneration with success. © 2014, Postgraduate Medical Institute. All rights reserved.

Biomaterial

Bone filling

Bone graft

