

THE COMPARISON OF MITIGATIVE EFFECT OF ALENDRONATE AND RISEDRONATE ON PARTICLE-INDUCED OSTEOLYSIS IN MOUSE CALVARIAN MODEL

Suk Ku HAN¹, Yong Sik KIM², Soon Yong KWON³

¹*St. Paul's Hospital, The Catholic University of Korea, Seoul (KOREA)*, ²*Kangnam St. Mary's Hospital, The Catholic University of Korea, Seoul (KOREA)*, ³*Mary's Hospital, The Catholic Univeristy of Korea, Seoul (KOREA)*

PURPOSE: To compare the mitigative effect of alendronate and risedronate on osteolysis of mouse calvarian model by using titanium and polymethylmethacrylate (PMMA) particles. **MATERIALS AND METHODS:** Experiments are divided into three groups, control, titanium (Ti) particle-treated and PMMA particle-treated group. Each Ti and PMMA particle-treated group were treated with alendronate or risedronate. RANK/Fc-treated group was regarded as a positive control. **RESULTS:** Comparing the number of osteoclast and the area of osteolysis on median sagittal plane, both alendronate and risedronate had significant mitigative effect on osteolysis induced by titanium or PMMA particles. There was no significant difference on mitigative effect between two groups. There was better capability of preserving bone thickness in risedronate group than alendronate group in. **CONCLUSION:** Both alendronate and risedronate may be an effective medication on mitigation of osteolysis which induced by titanium and PMMA particles. But, risedronate showed better structural bone preserving capacity than alendronate.