PERBEDAAN PEMBERIAN KOMBINASI BISFOSFONAT DAN KALSIUM LAKTAT TERHADAP JUMLAH OSTEOBLAS LUKA PENCABUTAN GIGI TIKUS (Strain Wistar)

THE DIFFERENCE BETWEEN BISPHOSPONATES AND LACTATE CALCIUM TO THE AMOUNT OF OSTEOBLAST ON TOOTH EXTRACTION OF THE RAT (Strain Wistar)

Abstract

Background. *Bone is living tissue whose cell always suffered degeneration and regeneration. many factors that can cause destruction of bone cells, one of which is age and lifestyle. Mechanism of bone destruction due to osteoclasts destroying bone and also the production of collagenase acid and proteolik enzyme that causes increased bone resorption. This mechanism is also called Osteoporosist. Bisphosphonates are used as an osteoporosis therapy, Bisphosphonate can reduce bone resorption by osteoclasts by binding to bone surface and inhibit osteoclast work by reducing the production of protons and lysosomal enzymes. Bisphosphonate causes a decrease in the production of osteoclasts so that bone can not afford to destroyed the bones, so the process can reduced bone resorbtion.* ***Purpose.*** *This study aims to compare the number of osteoblasts between bisphosphonate and bisphosphonates with calcium added.* ***Method.*** *Comparing the number of osteoblasts in rat tooth sockets, dividedinto three groups. The control group without treatment, an additional group with oral bisphosphonates, and groups with an oral bisphosphonate that calcium lactate was given orally.* ***Result.*** *This research in this study it was found that the use of bisphosphonates have a higher number of osteoblasts compared by bisphosphonates with calcium added. Excessive consumption of calcium will cause hypercalcemia that would regulate the body by removing calcium from the body, including calcium from the bone. Osteoblasts will also be reduced and is unable to form new bonematrix.* ***Conclusion.*** *There are differences between the groups without treatment by treatment group, but groups with bisphosphonate gives better results than the group with bisphosphonate plus calcium lactate.*

Keyword *: Bisphosphonate***,** *Bone, Calcium, Osteoblast.*