THE EFFECT OF *BASIC FIBROBLAST GROWTH FACTOR TO THE* ACCOUNT OF FIBROBLAST CELLS IN WOUND HEALING PROCESS OF MANDIBLE INCOMPLETE FRACTURE

The histological experimental research on the rabbits (*Oryctolagus cuniculus)*

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Abstract

This study was performed to determine the effect of *basic Fibroblast Growth Factor* to the number of fibroblast cells in healing process of mandible incomplete fracture. *BFGF* which is contain of amino acid-146 plays the important roles in the wound healing process, stimulate the angiogenesis, muscle growth and haematopoiesis. *BFGF* also stimulate the collagenase and plasminogen activator. *BFGF* can activate the platelet which cause the neutrophile, monocyte and fibroblast move to the around of injury. It also have the effect of proliferation on the osteoblast so it can increase the form of bone by increasing the number of cells which can synthesis the bone matrix.

Ten male rabbits, 1,5-2 kg of weight and were devided into two groups, treatment and control group. The symphisis of mandible was made an incomplete fracture by drilling with low speed along 1 cm. In the treatment group, *bFGF* was injected on the fracture but in the control group without *bFGF*. On the second day, all rabbits were decapitated and performed histological examination to count the fibroblast cells. Statistical analysis by using the student t test.

The result of the research showed that the significant difference in the number of fibroblasts cells between treatment group and control group ($p < 0,05$).

It could be concluded that *bFGF* arise the number of fibroblast cells on the healing process of the rabbits mandible incomplete fracture.