THE ADSORPTION SPEED OF $\beta$-TRICALCIUM PHOSPHATE ($\beta$-TCP) WITH THE SIZE OF 150-355 µm IN BLOOD TYPES O AND AB DURING SOCKET PRESERVATION AFTER TOOTH EXTRACTION

ABSTRACT

Background of the research: After tooth extraction, the resorption of the height and width of alveolar bone will generally occur. Thus, the preservation of socket must be conducted to eliminate bone resorption risks. Several methods actually have been developed to supply bone graft to alveolar bone. However, in this research, beta tricalcium phosphate ($\beta$-TCP) was used as an alternative to bone graft. It is also known that $\beta$-TCP has the same composition as natural human bone, which is osteoconductive and highly biocompatible. Osteoconductive properties in beta-tricalcium phosphate ($\beta$-TCP) can accelerate the growth of osteoblasts, as a consequence, the formation of bone cells can be accelerated.

The Objective of the Research: This research is aimed to determine the adsorption speed of $\beta$-tricalcium phosphate ($\beta$-TCP) with the size of 150-355 µm in blood types O and AB during preservation after tooth extraction.

Methods: 28 samples of $\beta$-tricalcium phosphate ($\beta$-TCP) with the size of 150-355 µm were divided into two treatment groups, namely 14 samples for blood type O and 14 samples for blood type AB.

Result: It is known that the average of the adsorption speed of $\beta$-tricalcium phosphate ($\beta$-TCP) with size of 150-355 µm in blood type O is 0.000275 ml / sec, while that in blood type AB is 0.000206 ml / sec.

Conclusion: There is no significant difference between the adsorption speed of $\beta$-tricalcium phosphate ($\beta$-TCP) with size of 150-355 µm in blood type O and that into blood type AB.

Keywords: $\beta$-tricalcium phosphate ($\beta$-TCP) with size of 150-355 µm, adsorption speed, blood type O, blood type AB