

ABSTRACT

PENGARUH PEMBERIAN *WHEY PROTEIN* DALAM PROSES PEMBENTUKAN *OSTEOBLAST* PADA PENYEMBUHAN LUKA PASCA EKSTRAKSI GIGI TIKUS WISTAR

EFFECT OF WHEY PROTEIN IN THE PROCESS OF OSTEOBLAST FORMATION ON WOUND HEALING AFTER TOOTH EXTRACTION WISTAR RATS

Background. Tooth extraction is a surgical procedure to remove the tooth from its socket, which is a common procedure in the field of dentistry. The main thing that must be considered after tooth extraction is the process of wound healing after tooth extraction. There are many components that involved in wound healing process, one of them is osteoblast. Osteoblasts have an important role in wound healing on bone remodelling stage. One of the natural products that can increase the number of osteoblast cells is whey protein. Whey protein contains lactoferrin, which has a function in increasing the number of osteoblast cells in the wound healing process. **Purpose.** To observe the effect of whey protein feeding is given for 7 days on the activity of osteoblast cells. **Method.** An in vivo research that uses twenty four male wistar rats and divided into 4 groups, control, treatment 1 (10% concentration of whey protein), treatment 2 (20% concentration of whey protein), and treatment 3 (30% concentration of whey protein). Every sample's tooth will be extracted and will be given whey protein. The treatment of every group will be given whey protein once daily for 7 days. **Results.** There are significant differences ($p=0,005$) between Control Group and Treatment Group 3 (30% concentration of whey protein). **Conclusion.** Whey protein can increase the number of osteoblast cells in Wistar rats after extraction.

Keywords: tooth extraction, osteoblast, whey protein