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HISTOLOGICAL EVALUATION OF BONE TISSUE RESPONSE TO SILICON-BASED ENDODONTIC MATERIAL

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Successful endodontic treatment implies that the materials for obturation remain in the tissue, if possible forever. It is therefore essential to know the long-term effects of materials on tissue. This study aimed to evaluate the histological response of bone tissue to the implanted dimethylpolysiloxane-based material in the artificially prepared defect. The sample comprised 20 Wistar rats. The defect was formed in the mandible of rats by sterile stainless steel burs. Dimethylpolysiloxane-based sealer (Roeko Seal) was implanted in the defects of the experimental group while the defects of the control group were left to heal spontaneously. Half of the animals from both groups were put down after thirty days, whereas the other half was euthanized after ninety days. Microscopic preparations were analyzed by light microscope. A fibrous callus and a young bone were observed thirty days after the implantation. Ninety days after the implantation, the bone around the unabsorbed material was completely healed. Roeko Seal does not decelerate the healing of bone tissue, it enables complete healing of tissue around the material.

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