

Original article

Bone Tissue Response to Endomethasone Implanted into the Rat Mandible

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SUMMARY

The aim of the paper was to investigate the tissue response to the implantation of "Endomethasone" (Septodont) in artificially prepared defect in the rat mandible.

Sixteen Wistar male rats were used for the experiment. After anesthesia, a defect between the midline and the mental foramen of the left mandible was made (diameter 1.4 mm, 1.6 mm depth) using sterile steel burs. In the defect of the experimental group (12 animals) "Endomethasone" was implanted while the defect in the control group (4 animals) was left to heal spontaneously. One half of animals of both groups was sacrificed after fifteen days, and the second half after sixty days. The samples consisted of the defect and the surrounding bone. After routine decalcination and processing, the samples were embedded in paraffin, and microscopic preparations were made, on the basis of which a microscopic analysis was performed.

Fifteen-day-old specimens showed the early signs of bone resorption, as well as granulated connective tissue, hyperemic blood vessels, fibrin exudate to a lesser extent, with the difference that inflammatory infiltrates were less present in the experimental group. Sixty-day-old specimens demonstrated the degree of bone healing; tissue filling with newly formed bone was significantly more advanced in the control group. Experimental group showed a sign of delay with significant presence of callus tissue that more in the form of focus showed a deposition of the young bone tissue.

Endomethasone masks the inflammatory reaction which follows operational procedures. In the long run, according to the results of the present research, Endomethasone can interfere with bone healing by causing delayed inflammatory reaction.

Key words: endodontic sealers, healing, bone, Endomethasone

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