



A non-steroidal anti-inflammatory drug (ketoprofen) does not delay β -TCP bone graft healing

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Résumé en anglais	<p>β-Tricalcium phosphate (β-TCP) is a suitable biomaterial in oral and maxillofacial surgery since it can induce a rapid proliferation of woven bone. Granules, prepared by the polyurethane foam method, were implanted in critical size defects performed in the femoral condyles of New Zealand rabbits. Animals were studied after 8 and 28 days. Ketoprofen (a non-steroidal anti-inflammatory drug (NSAID)) was given for 8 and 28 days to evaluate its effects on the healing of the graft. Before euthanasia, the rabbits received an intravenous injection of fluorescent microbeads. Bones were analyzed by microcomputed tomography. β-TCP granules induced metaplastic bone trabeculae as early as 8 days post-surgery. At 28 days, the amount of bone was increased and the biomaterial volume decreased due to simultaneous macrophagic resorption. The amount of macrophages labeled with microbeads was less in the grafted area than in the vicinal intact marrow spaces. Ketoprofen had no effect on the amount of bone formed and on the number of labeled macrophages. The influence of small doses of NSAID, given in a short duration period, did not present deleterious effects on bone graft healing.</p>
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