Dokumenttyp: journal article

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Titel des Beitrags: Are Biodegradable Osteosyntheses Still an Option for Midface Trauma? Longitudinal Evaluation of Three Different PLA-Based Materials.

Abstract: The aim was to evaluate three different biodegradable polylactic acid (PLA)-based osteosynthesis materials (OM). These OM (BioSorb, LactoSorb, and Delta) were used in 64 patients of whom 55 (85.9%) had fractures of the zygoma, five (7.8%) in the LeFort II level, two of the frontal bone (3.1%), and two of the maxillary sinus wall (3.1%). In addition to routine follow-up (FU) at 3, 6, and 12 months (m) (T1, T2, and T3) all patients were finally evaluated at a mean FU after 14.1 m for minor (e.g., nerve disturbances, swelling, and pain) and major (e.g., infections and occlusal disturbances) complications. Out of all 64 patients 38 presented with complications; of these 28 were minor (43.8%) and 10 major (15.6%) resulting in an overall rate of 59.4%. Differences in minor complications regarding sensibility disturbance at T1 and T3 were statistically significant (P = 0.04). Differences between the OM were not statistically significant. Apart from sufficient mechanical stability for clinical use of all tested OM complications mostly involved pain and swelling probably mainly related to the initial bulk reaction attributable to the drop of pH value during the degradation process. This paper includes a review of the current aspects of biodegradable OM.

Zeitschriftentitel / Abkürzung: Biomed Res Int

Jahr: 2015