

elevation with synthetic Hap (RTU RBIAC) or Biooss (Geistlich) granules and dental implant insertion.

Routine histological method - staining with hematoxylin and eosin and evaluating with Leica BME microscopy was used for obtaining a review picture.

Biotin and streptavidin immunohistochemical method was used to detect growth factors - transforming growth factor β 1 (TGF β 1) and bone morphogenic protein 2 (BMP 2).

Results: Hap and Biooss granules were surrounded by new formed bone. Optical density of new formed bone is 2–2.5 times that optical density of the residual bone.

In biopsies biomaterial/host tissue hybrid consisted of small bone trabecules, fibrous tissue and granules of irregular shape without inflammatory cells. Degradation of Hap granules by activity of osteoclast like macrophages was observed. Evaluating the expression of TGF β 1 and BMP 2 many positive structures were found.

Conclusions: Assessment of bone regenerate with CBVT and trepan biopsies may help in decision making for dental implant placement in the posterior maxilla. Expression of TGF β 1 and BMP 2 have demonstrated the osseointegrative ability of biomaterials.

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PP 43 (D011) Evaluation of bone regeneration after maxillary sinus floor elevation with Hap using Cone Beam volume tomography (CBVT) and histomorphological analysis

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Introduction: The aim of this study was to evaluate the regeneration of bone after maxillary sinus floor elevation with Hap ceramic granules. Morphological analysis of biopsies from Hap/host tissue hybrid and residual alveolar bone and analysis of radiological outcomes was done.

Material and Methods: The properties of sintered ceramic were investigated by chemical compositions of high purity, X-ray diffraction, SEM, FT-IR methods. CBVT (Kavo) and trepan biopsies were evaluated in 20 patients six months after sinus floor