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CHAPTER 19

PURIFIED BOVINE BONE MORPHOGENETIC PROTEIN FOR CLINICAL USE IN DIFFICULT CONDITIONS OF CRANIO-MAXILLOFACIAL SURGERY

H.F. Sailer and E. Kolb

An overview is presented in tabular form of our experience with our preparations of BMP from bovine bone in 1106 procedures on the face and cranium in 482 patients. In more detail, three typical patients with major preprosthetic reconstructions using ilicac bone grafts and titanium screw implants are described. All patients are examples of compromised bone and/or soft tissue conditions and cannot be considered routine indications for the operations. The most endangered implants became osseointegrated after 6 to 8 1/2 months as judged from clinical examination and CT imaging. These results demonstrate the efficacy of purified, concentrated BMP preparations, able unequivocally to induce bone even in areas with seemingly lost implants.

Another less homogeneous patient group presented comprises cases with old post-traumatic or fresh donor site craniectomy defects and a patient with a congenital malformation (Apert's syndrome) and operative defects of the skull between autologous bone struts in a cage-like forehead reconstruction. In all cases the defects were closed with stratified implants made from cartilage strips interlaced with BMP paste. The reconstructed areas became clinically solid after a few months. CT images taken in three cases showed progressive calcification starting in the BMP

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