
Using of dental implants in reconstructive surgery

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Introduction

Soft tissue and bone defects occur in the orofacial area most often due to injury or after complex anti-tumour therapy. Patients with intermaxillary anomalies and face deformities represent a special group. These conditions markedly limit patients especially as for the function and cosmetic aspects and consequently they are accompanied by mental disorders. In the submitted work that is supported by the clinical casuistics the authors emphasize the need for interdisciplinary cooperation. The maxillofacial surgery specialties, including dental implantology, plastic surgery, ophthalmology, neurosurgery, face prosthetics, physiotherapy and other participate in the complex reconstructive therapy of defects. A replacement of facial defects was solved by the authors of transplantation of vascularized muscle lobes and bone grafts and dental implants were implanted into the bone at the same time in order to perform subsequent prosthetic treatment of the dental defects.

Casuistics

Casuistic no. 1:

A 27-year-old patient T.K. with a diagnosis of ameloblastoma mandibulae l. utr; th.-partial resection of the lower jaw in the extent 43-angle lower left; the reconstructive procedure was performed three months after resection of the primary tumour (a defect of a bone and soft tissues was replaced by vascularized bone graft taken from crista ossis illii together with m. iliopsoas on vascular stem of a. epigastrica superior); dental implants were inserted into the bone graft during the same surgery (STI-Bio-C, Impladent, Lasak Ltd., Czech Republic).

Casuistic no. 2:

A 55-year-old female-patient J.N. with a diagnosis of carcinoma radius linguae l. sin.; th T4N0M0 - partial resection of the lower jaw in the extent of 34-arm lower jaw in the left; resection of the tongue root and face and block

cervical dissection in the left. It was followed by actinotherapy using a cobalt emitter up to a maximum dose of 65 Gy on the area of the primary tumour and 60 Gy on the cervical area. The reconstruction surgery was performed six months after the finished actinotherapy (a defect of a bone and soft tissues was replaced by vascularized bone graft taken from crista ossis illii together with m. iliopsoas on vascular stem of a. epigastrica superior); dental implants were inserted into the bone graft during the same surgery (STI-Bio-C, Impladent, Lasak Ltd., Czech Republic).

A prosthetic therapy was performed six months after insertion of the implants and two of three inserted implants have been used. A mesially inserted implant could not be used due to its position and post-surgery cicatricial changes.

Discussion and conclusion

The indication – status after mandibular resection or hemimandibulectomia - included in total seven implants in a transplant bone graft. All implants are healed nine months after transplantation of the graft and no implant has been rejected so far. We consider that the minimal healing period is 6–9 months in the implants inserted into the vascularized bone grafts.

This work has to be considered as a pilot study whose aim was to get the experience with reconstructions of extensive tissue defects in the area of oral cavity and face. Single-period insertion of dental implants was performed without complications related to healing of the implants and we have not found absorption of a transplant bone. This procedure results also in shortening of time period associated with more extensive reconstructions.

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