

The Use Of Allogeneous Bone Block Graft Combined With PRP In Reconstruction Of A Bone Defect In The Anterior Maxilla. A Case Report.

SZADOWSKI M, POPOWSKI W, FRANK SZ, WOJTOWICZ A.

Department of Dental Surgery, Medical University of Warsaw
Head of the department: Prof. A. Wojtowicz



1. Before treatment.



2. Healing abutment.



3. After crown cementation.



4. Nine months after crown cementation.

Background

Insufficient bone volume is one of the main problems preventing implant treatment. One of the most common causes of bone loss is chronic periapical inflammation which leads to the formation of a cyst. In such cases bone grafting procedures before implant placement are required.

The aim of the study

The aim of the study was to evaluate the effectiveness of the use of cancellous bone block allograft in reconstruction of bone defect in the anterior maxilla after extraction and cyst enucleation.

Material and methods

This paper describes the use of allogeneous block of cancellous bone combined with autologous platelet-rich plasma - PRP. Immediately after the procedure, after a 6-month healing period and 9-months after implant placement the CB CT scans were taken. The authors performed linear measurements at the top and at the base of the alveolar ridge and at the height of the cavity after cyst enucleation. The allogeneous bone block was measured too. All measurements were performed in the sagittal plane.

Results

There was no significant graft resorption after 6 months of the surgery. The resorption does not exceed 1 mm in each measurement, which is consistent with the data available in the literature. There was even a slight increase of the width on top of the alveolar ridge. The borders between the graft and the surrounding bone tissue have blurred.

Surgery

Extraction of tooth 11 and cyst enucleation.

Bone block bolted with MODUS screws.

Allogeneous block of cancellous bone combined with autologous platelet-rich plasma (PRP)

6 months after the surgery.

The borders between the graft and the surrounding bone tissue have blurred.

Implant placement

The borders between the graft and the surrounding bone tissue have blurred. Immediately after the procedure, after a 6-month healing period and 9-months after implant placement the CB CT scans were taken. The authors performed linear measurements at the top and at the base of the alveolar ridge and at the height of the cavity after cyst enucleation

Conclusions and clinical implications.

A cancellous bone allograft can be used successfully as graft material for the treatment of maxillary ridge defects. This type of bone graft can be used safely in the areas of implant placement as a suitable alternative to autogenous grafts. This procedure appears to be safe and effective for the treatment of localized alveolar ridge defects.