Abstract

Immediate loading for fixed restoration of edentulous jaws with a reduced number of implants is reported since several years. The use of tilted implants allows the treatment in the atrophic jaws without the need of large augmentation procedures at one surgical appointment.

Immediate-function with 4-6 implants (2 tilted and 2-4 axial) is an accepted alternative for fixed restorations in edentulous arches. It improves prosthetic support by increasing inter implant distance. It provides also better anchorage in bone with longer implants. In this clinical report, a method of restoring edentulous maxilla and mandible with the “Fast and Fix” immediate function concept and a milled breCam.BioHPP framework is described.

Background and Aim

BioHPP is a partly crystalline PEEK strengthened with ceramic. It has been used for years in orthopedics and medical technology(1).

The improvement with ceramic fillers enabled the material properties to be significantly improved. It is anti-allergic, has no galvanic effect, conducts heat similar to teeth. It can be used monolithic or veneered. BioHPP frameworks can be constructed either via CAD/CAM manufacturing or via the conventional lost wax technique. BioHPP is a good material of choice for large implant supported frameworks because it provides the same flexibility as bone/dentin (2,3,4).

The purpose of this study is to evaluate clinical effectiveness of BioHPP as a new frame work material in full edentulous case.

Methods and Materials

The patient in this clinical report has been treated with nine dental implants placed with the “Fast and Fix” concept in the maxilla and mandibula. Metal supported temporary fixed restoration has been placed in 24 hours. Upon completion of osseointegration period, definitive screw retained fixed restorations is produced with breCam BioHPP. Open tray impression is taken at abutment level. The open tray impression posts were splinted with FRP resin. Pourd model is then scanned and framework is designed and milled. After checking the passive fit of the breCAM BioHPP framework individual crowns were produced with breCAM.HIPC and adhesively cemented.

Results

No clinical and radiographic changes were noted around the tilted and axial implants. No prosthetic complication have been seen. The patient is scheduled for quarterly follow-up program to determine the effectiveness of BioHPP frame work.

Conclusions

Immediate loading of tilted dental implants placed in edentulous maxilla with a definitive screw-retained BioHPP prosthesis fabricated with CAD/CAM technology provide reliable and predictable results.

References

1. www.bredent.com