UNIQADENTAL

Case Study

Single implant screw-retained restoration after extraction of a tooth affected by cystic granuloma

Abstract: The patient came with the problem of cystic granuloma in the area of tooth 36. According to clinical indications, the tooth was subject to extraction. Immediately after extraction, a guided bone regeneration surgery was performed. It was necessary to restore sufficient bone tissue to place an implant.

The recovery period took 8 months. After that, a single 4.2 mm, L10 implant was placed.

The restoration was screw-retained to reduce the risk of soft tissue inflammation due to contact with residual cement. For this purpose, an abutment with anti-rotation elements was chosen. The crown is made of zirconium, the material is durable and the risk of chipping even in such a loaded area as tooth 36 is minimal.

Introduction

When contacted, the patient complained of pain and swelling in the area of tooth 36. During the examination, cystic granuloma was discovered; tooth extraction and surgical removal of altered tissues from the lesion were required.

For dental practitioners, this case is interesting for the following reasons:

- How we managed to solve the problem related to the loss of a significant amount of bone tissue
- How to reduce the risk of complications due to contact with cement — using screw retention for a single restoration

Patient History

A female patient with soft tissue swelling, gum inflammation and pain in the area of tooth 36 contacted us.

X-rays showed cystic granuloma, the tooth was destroyed and had to be extracted.

The problem after the extraction was a significant cavity, completely unsuitable for implant placement.

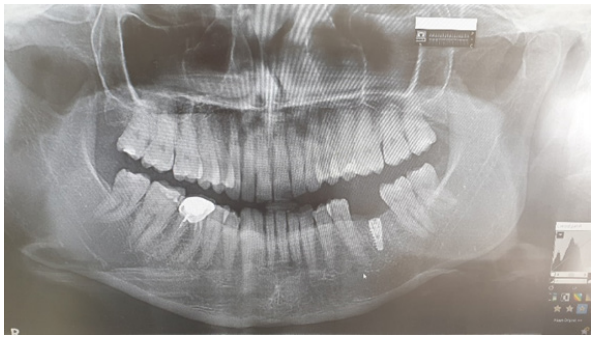
Treatment Plan

1. Filling the bone defect with an augment and a long period of bone tissue restoration.
2. Implant placement.
3. Forming a gingival cuff.
4. Restoration on an abutment with screw retention and anti-rotation elements.

Treatment Implementation

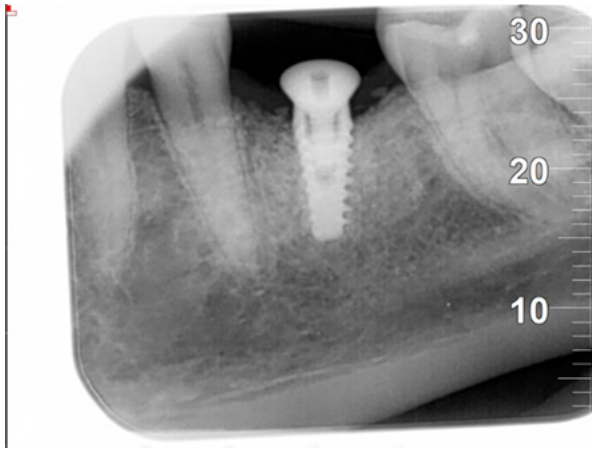
1. Extraction of tooth 36.
2. Removal of altered tissues from the lesions.
3. One-stage bone grafting surgery to restore the volume of bone tissue.
4. After a period of bone tissue restoration, which took 8 months, the UH8 Pure&Porous Implant Ø4.2 L10 Internal Hex RP was placed. This is the optimal diameter option for the chewing area. The length of

X-ray of a problematic tooth



X-ray showing a successfully placed implant

Healing cap placement and the patient's condition when the implant placement surgery was complete



X-ray of the gingiva formation stage

the implant is also optimal to fully eliminate the risk of mandibular nerve injury.

5. Next, a healing cap was placed into the implant, and the soft tissues were sutured until complete osseointegration.
6. After a period of osseointegration, the gingival cuff was formed using a healing cap.

This photo shows that:

- Osseointegration is successful and fully completed
- There is no bone loss around the implant neck

7. After the formation of the gingival cuff was completed, a Ti-base abutment with a zirconia crown was installed. Since this is a single implant restoration, a multi-unit abutment is not suitable, and an abutment with anti-rotation elements is required as illustrated below.

Ti-base abutment for screw retention of the prosthesis with anti-rotation elements

Conclusions

Implant status: Osseointegrated

Bone tissue status: There is no bone loss

Stability: Good primary stability

Aesthetics: Good

Restoration status: Screw-retained Single Ti Base restoration