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

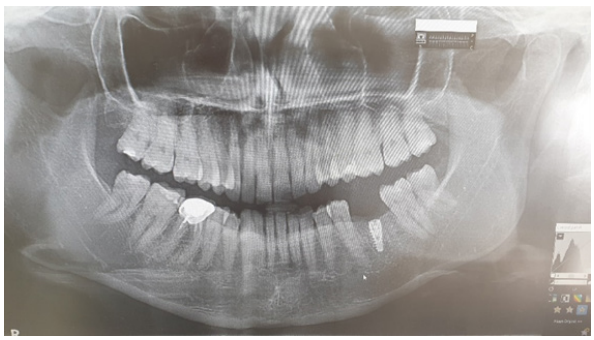
1. Filling the bone defect with an augment and a long period of bone tissue restoration.
2. Implant placement.
3. Forming a gingival cuff.
4. Restoration on an abutment with screw retention and anti-rotation elements.

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

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

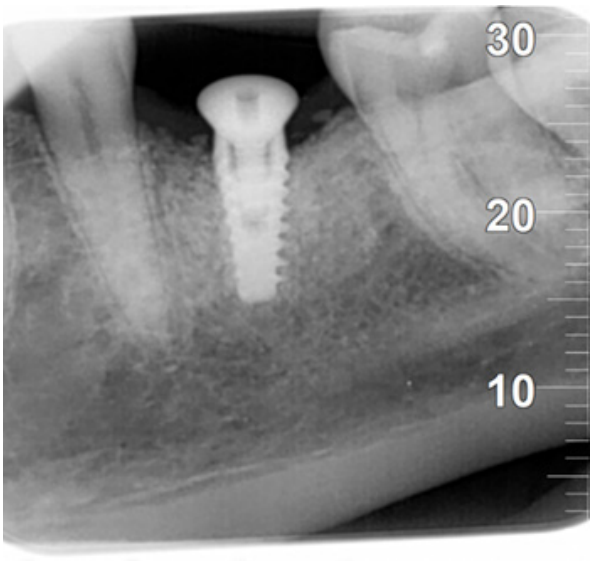


X-ray showing a successfully placed implant

5. Next, a healing cap was placed into the implant, and the soft tissues were sutured until complete osseointegration.

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

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



X-ray of the gingiva formation stage

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.

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