

Ankylos implant placement and IPS e.max CAD single crown – First upper premolar in 90 minutes

Case Description

A 56-year-old female patient came to my practice with pain and some loosening of tooth 24. After an initial examination, a CBCT scan was performed with Orthophos SL, which determined that a horizontal root fracture and a periapical infection were the cause of the problems. Together with the patient, it was decided to extract the fractured tooth and immediately restore the gap with an implant. At the next appointment, the tooth was gently removed. An implant (Ankylos A11) and a gingiva former were placed in the cleaned bony extraction socket and filled with particulated bone (Symbios Xenograft granules). The premolar crown was subsequently trimmed and reused as a temporary solution, while retaining the soft tissue contour. After a three-month healing period, the patient's final prosthetic restoration was started. Three scans of the maxilla were taken with CEREC Primescan: one scan of the temporary restoration (natural crown), which served as a reference for the permanent crown to be fabricated; another to record the soft tissue contour; and a third scan with the IO FLO-S scan body. In addition, a mandibular scan and a bite registration were carried out. CEREC Software was used for the design of the restoration in which the Biocopy setting was utilized. The gingival mask functioned as a reference for the emergence profile. The lithium disilicate crown (e.max CAD A14 block, Ivoclar Vivadent) was produced using CEREC Primemill. After crystallization (CEREC SpeedFire) and characterization, the restoration was cemented onto an Ankylos TitaniumBase. The crown itself was screwed to the implant and the screw channel filled with composite. This appointment took only a total of 90 minutes. At the follow-up visit five days later, the patient was very satisfied, saying, "It is as if nothing happened at all."

Discussion

A possible alternative would have been a conservative treatment approach with root canal treatment and stabilization of tooth fragments. However, the patient rejected this due to the relatively high risk of failure as well as a previous negative experience. Restoration with a bridge after extraction of the affected tooth was also ruled out. The advantage of the selected implant treatment, especially using the natural tooth crown as a temporary restoration, was the preservation of esthetics and the natural soft tissue contour.



Dr. Carlos Repullo
Sevilla, Spain



Before:
Initial situation.



After:
Final result.

Clinical Images



Horizontal root fracture and a periapical infection caused patient pain and some loosening of tooth 24.



Extraction of fractured tooth



Three months later: final prosthetic restoration



Result: preservation of esthetics and the natural soft tissue contour.



Workflow Images



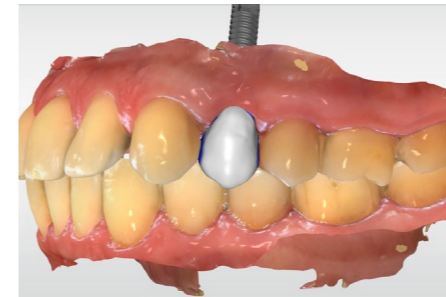
Scan of the temporary restoration (natural crown), which served as a reference for the permanent crown to be fabricated.



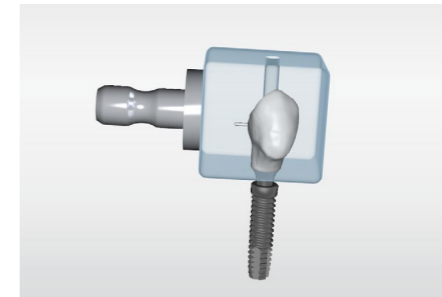
Scan after tooth was extracted to record the soft tissue contour.



Scan with ScanPost and Scanbody.



Restoration design.



CEREC Primemill fast grinding mode was selected.



After crystallization and characterization, the restoration was cemented onto an Ankylos TitaniumBase.