

CASE STUDY

Laser-Assisted Closed Crown Lengthening #8 and #9

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Pre-Op



Immediate Post-Op



7 Days Post-Op



30 Days Post-Op



Complete with Insert

INTRODUCTION

This Solea laser-assisted closed crown lengthening includes the removal of both soft tissue and bone using local anesthetic. It demonstrates precision, clean cutting and very fast healing.

CLINICAL CHALLENGE

The patient came directly out of hygiene with a chipped tooth #8. The patient exhibited significant wear on teeth #8 and #9 due to bruxism, leading to super eruption. As a result, the gingival margins of these teeth were positioned too coronally, compromising the esthetics. The patient was aware that teeth #7-10 required crowns, and while tooth #8 was temporarily bonded, a more permanent solution was needed for teeth #8 and #9.

TREATMENT CONSIDERATIONS

A pre-prosthetic esthetic crown lengthening using Solea was suggested to correct the gingival margins before placing crowns on teeth #8 and #9. A mock-up using flowable composite demonstrated the anticipated improvement, which the patient found satisfactory. Although orthodontic intrusion was an option, the patient preferred a minimally invasive laser-assisted crown lengthening compared to traditional periodontal surgery, which would have involved a flap and multiple sutures. The patient requested to complete the procedure that same day while they were already in the office.

CLINICAL OBJECTIVES

The primary objective was to perform a Solea laser-assisted crown lengthening procedure to reposition the gingival margins and underlying bone to ensure proper esthetics and facilitate the subsequent placement of crowns on teeth #8 and #9.

SOLEA PROCEDURE DETAILS

The patient was anesthetized with 1 carpule of 4% septocaine with epi 1:100,000. The Solea laser-assisted crown lengthening involved removing excess gingival tissue and approximately 2 mm of bone to reestablish the proper gingival architecture. The bone was carefully contoured to ensure that it was positioned 3 mm apical to the desired gingival margins, aligning with the esthetic goals. The entire procedure was completed in approximately 40 minutes.

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CLINICAL OUTCOMES

Solea's precision and ability to maintain a clean surgical site facilitated an efficient and minimally invasive procedure, allowing it to be performed on the same day despite being unscheduled. Rapid healing was also observed. In contrast to traditional methods, which would have required 6-8 weeks for healing before restorative work could proceed, this procedure allowed for preparation and impressions for emax crowns on teeth #8 and #9 to be completed just 3 weeks post-operatively.

CONCLUSION

The use of Solea for this closed crown lengthening procedure provided significant advantages over traditional surgical methods, including reduced post-operative pain, fast healing, and the ability to complete the procedure during an unscheduled visit. The patient achieved the desired esthetic results with minimal discomfort and a quick return to normal function, demonstrating the effectiveness and efficiency of Solea in complex dental procedures.

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