



# Immediate Implantation and Immediate Definitive Lithium Disilicate Custom Abutment: A Case Report

**GÜMÜŞ P\***, *Ege University, School of Dentistry, Department of Periodontology, İzmir, Turkey*

**ÇÖMLEKOĞLU ME**, *Ege University, School of Dentistry, Department of Prosthodontics, İzmir, Turkey*

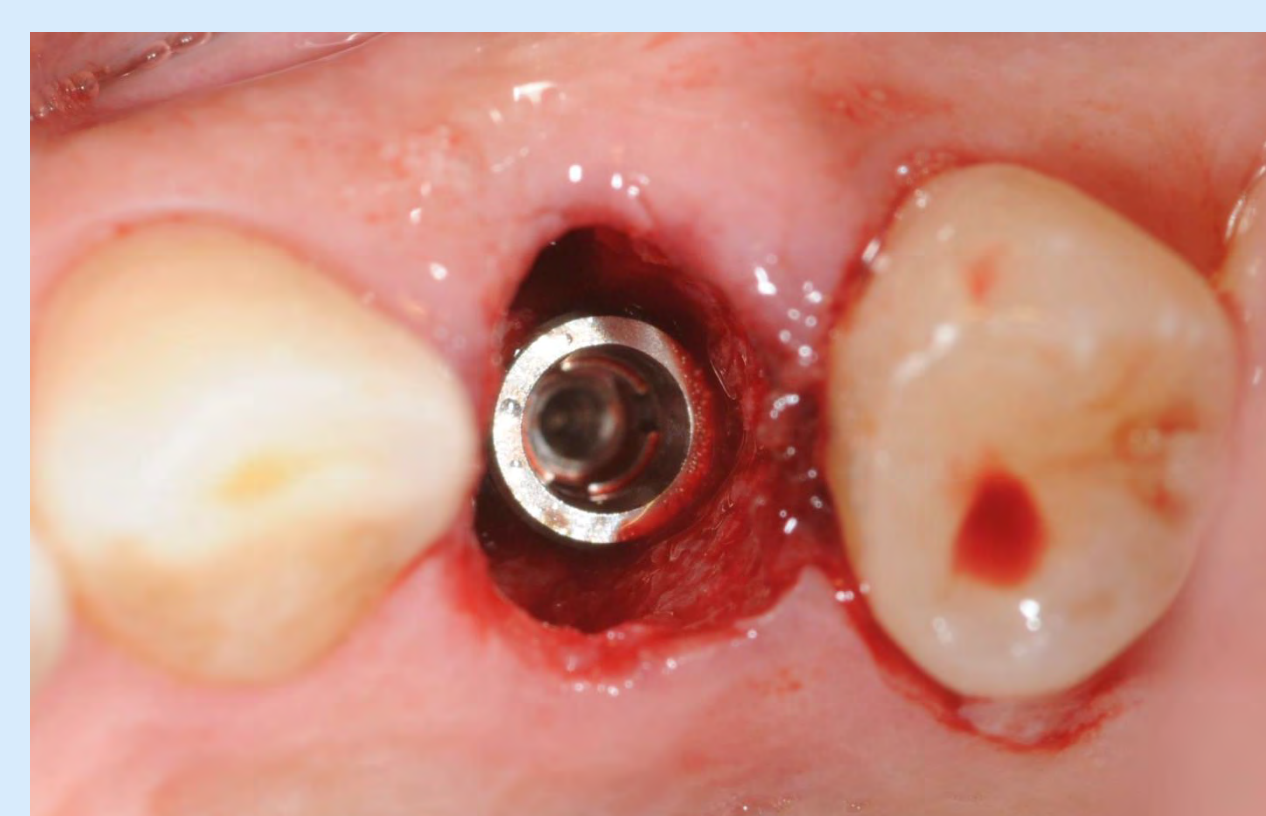
\* Ege University, School of Dentistry, Dept. of Periodontology, Bornova-35100, İzmir, Turkey Phone: +90 232 3881105 [pinar.gumus@ege.edu.tr](mailto:pinar.gumus@ege.edu.tr)



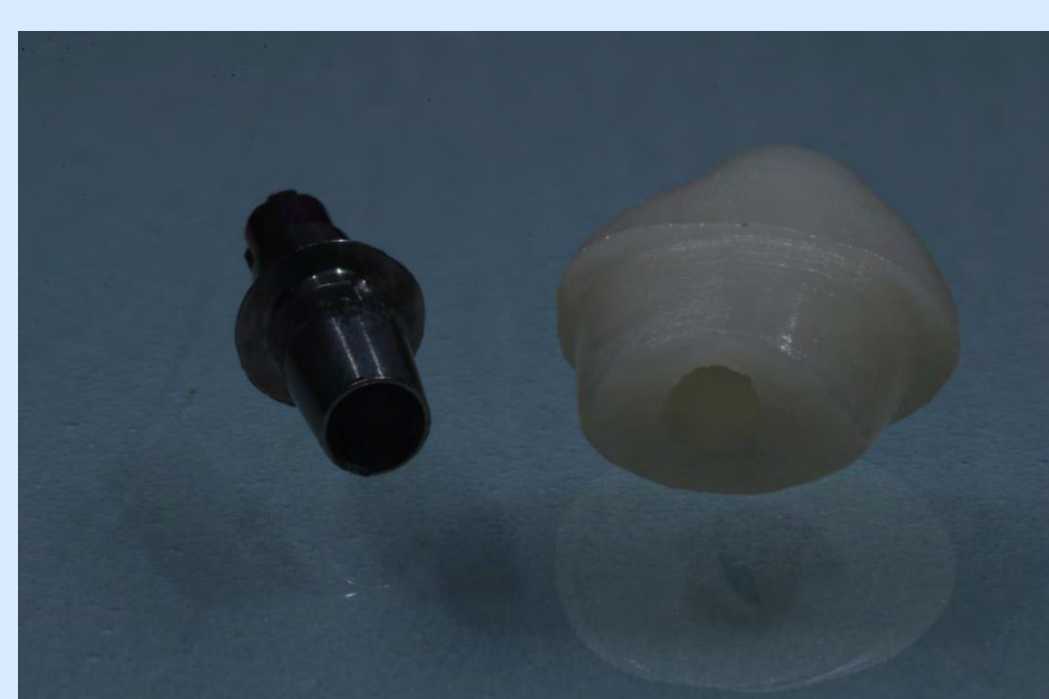
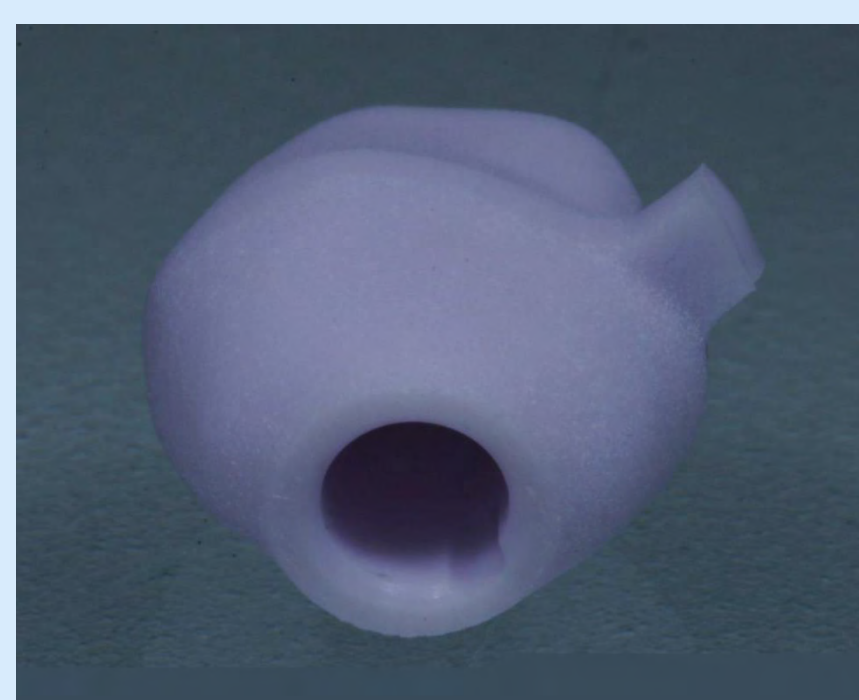
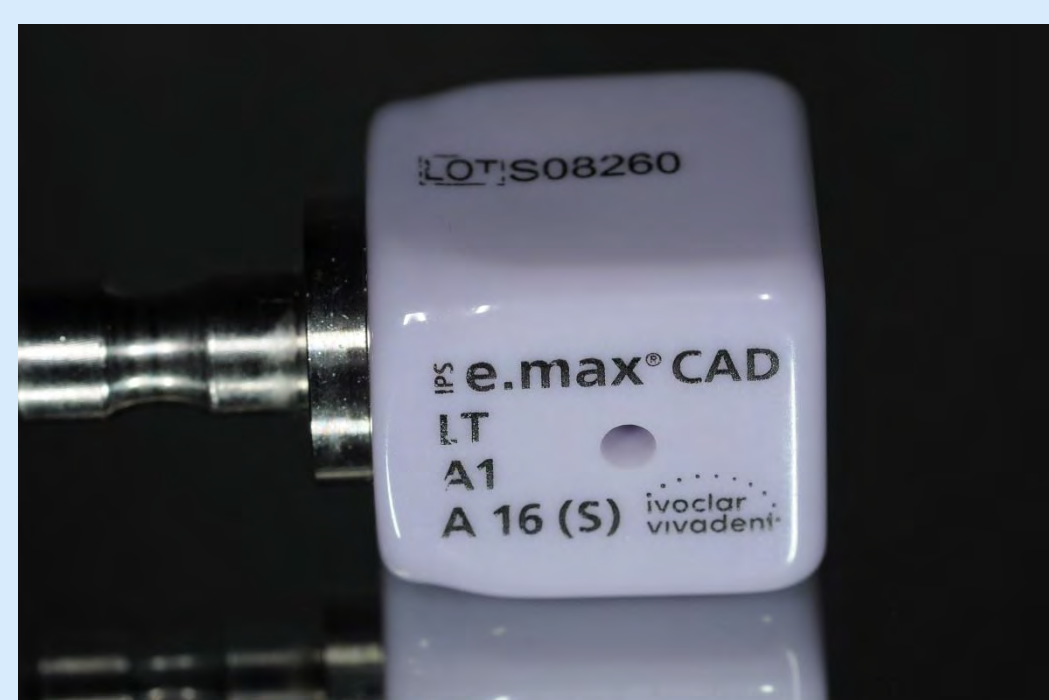
## Aim

Proper implant position, reduced number of visits in dental office, reduced overall treatment time and costs, preservation of bone at the site of implantation, optimal soft tissue aesthetics, and enhanced patient satisfaction are the major advantages of immediate implant placement. Repeated abutment manipulation leads to the tear of the mucosal seal around the healing caps and/or abutments and as a consequence, biologic width may migrate apically and marginal vertical bone loss may occur. Fabrication and insertion of definitive customized abutment immediately after implantation may prevent this migration.

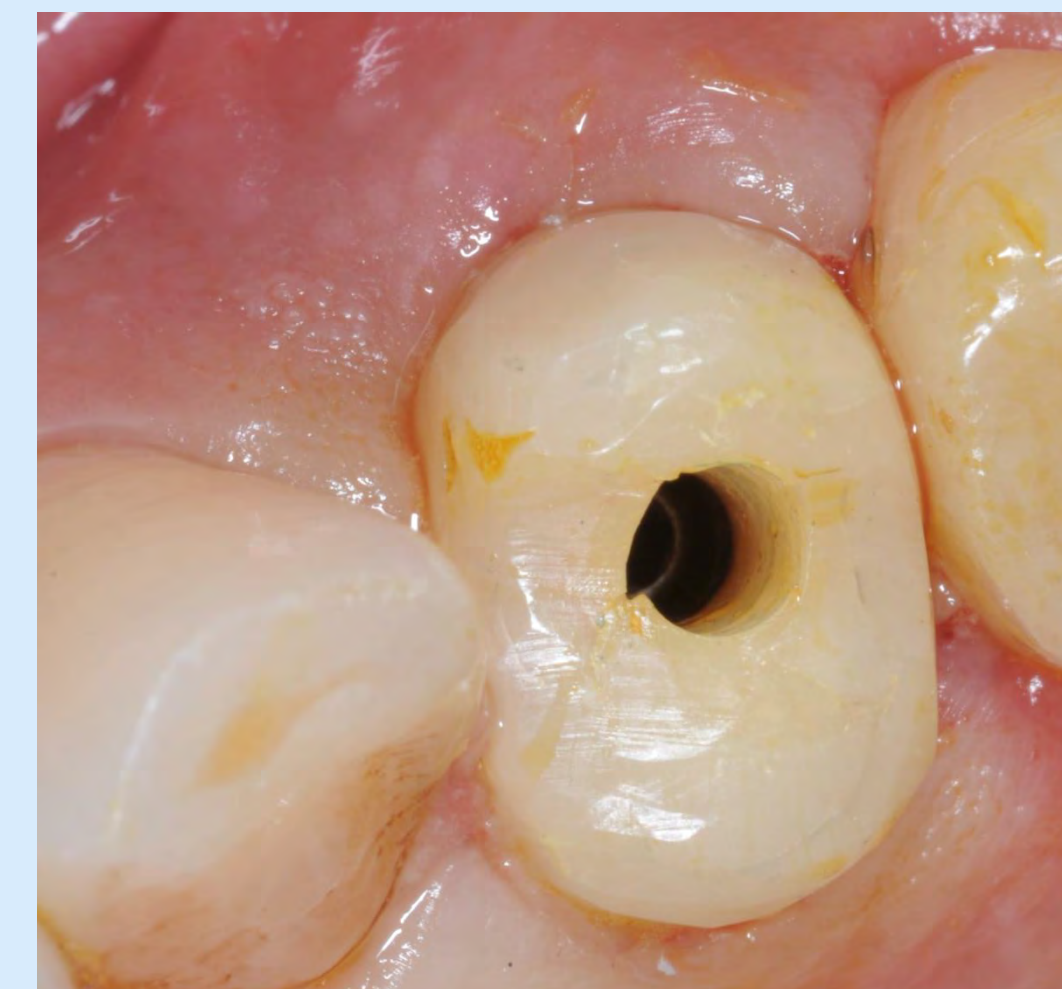
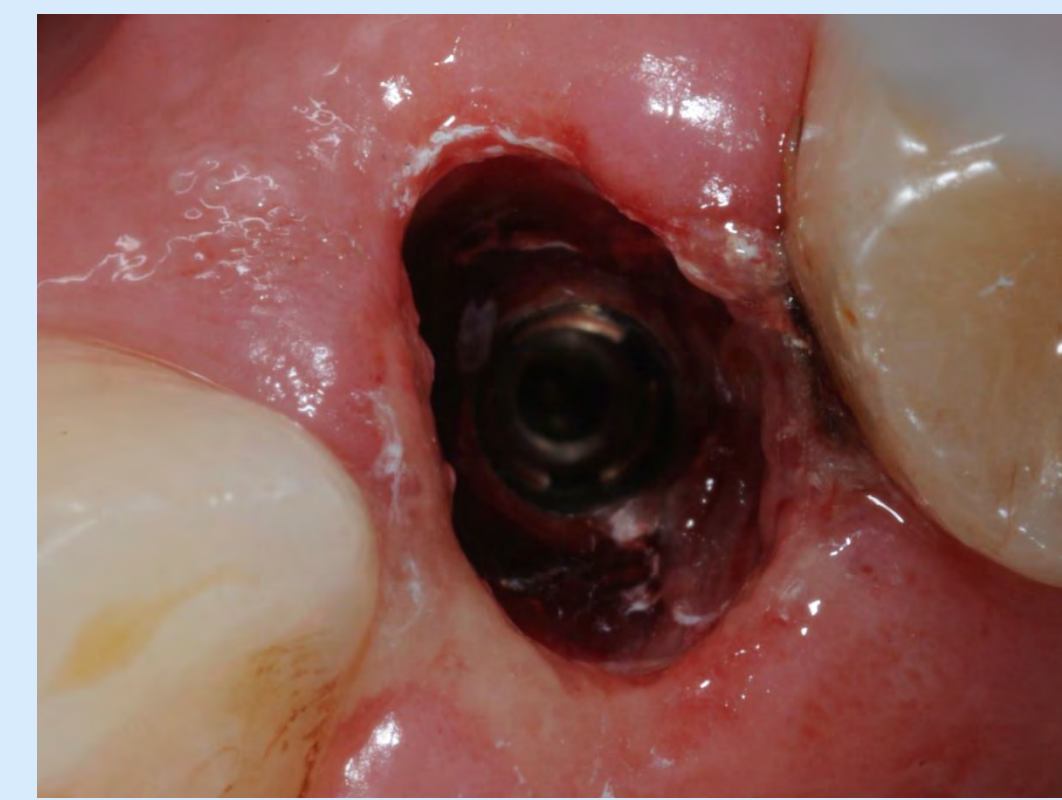
## Case



Tooth with vertical root fracture was extracted and immediately, a bone level implant was inserted (Conelog; diameter: 4.3 mm and height: 11 mm). Individualized healing abutment was made from composite resin to prevent collapse of the soft tissue during the preparation of the individual lithium disilicate abutment.



The abutment was milled out of a lithium disilicate block with an appropriate colour and fit-checking on corresponding titanium base was made before crystallization process of the glass-ceramic material. The pre-sintered abutment was mounted in a ceramic furnace and crystallization firing was performed according to the manufacturer's instructions. Then the sintered abutment was tried-in again on the corresponding titanium base. The lithium disilicate abutment was luted adhesively with a hybrid abutment cement with the aid of a specially designed pipette placed along the centre of the abutment hole to serve as a hollow for cement obturation and the excess was removed.



The lithium disilicate hybrid abutment was tried intraorally and hand-screwed at the time of surgery followed by chair-side fabrication of an acrylic non-occluding temporary aesthetic facet and composite back-up.



After 3-months



After 3-months, only the temporary coronal part was removed and the final restoration was produced by the previous digital data from a glass ceramic block (e.max CAD, IvoclarVivadent) by a CAD/CAM system (Cerec MCXL, Sirona). The final crown was luted using a dual-curing resin cement (RelyX Ultimate, 3M ESPE) and the patient was followed for 9 months.

## Conclusion

The results of this case report suggest that especially soft tissue structure and bone loss can be prevented by not dis/reconnecting the mounted individualized abutment immediately after the immediate implant placement.