An innovative computer guided ridge splitting flapless technique with simultaneous implant placement: A case report

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Abstract

Purpose
In the conventional ridge splitting technique, a complete flap is raised to allow adequate visibility of the bone defect which can result in disturbance of vascular supply and increase bone resorption rates. In this case report, a new innovative computer guided closed alveolar ridge splitting flapless technique has been advocated to avoid this disruption.

Materials and Methods
After thorough clinical and radiographic evaluation, the patient presented in this case report showed inadequate bone width in the missing first premolar region.The procedure involved a series of creating and designing special 3D virtual guide slits that can accommodate and precisely fit the tools used for the alveolar ridge splitting technique.

Results
After a three months follow-up, the Implant was found to have successfully osseointegrated both clinically and radio-graphically. The Implant deviation from the pre-planned virtual implant position was as well found to be within an acceptable range.

Conclusion
For the alveolar ridge with insufficient thickness, this flapless, computer guided ridge splitting technique can be a predictable, less invasive and an a traumatic technique with immediate implant placement.

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