

LEADING REGENERATION

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Major Bone Augmentation



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Dr. Saurabh Kamat

**Missing Mandibular
Central Incisors Secondary
To Trauma**

The Situation

Patient met with a Road Accident and was treated for comminuted symphysis fracture of the mandible. One year post trauma, the patient desired replacement of the missing lower central incisors with implant supported prosthesis. Due to deficient bone height & width, 2-staged

procedure was advised to the patient. In the first step, the vertical and horizontal dimensions were restored using the Khoury technique for bone augmentation. After 7 months of healing, two implants were placed in a prosthetically optimal position.

The Risk Profile

Risk Factors	Low Risk	Medium Risk	High Risk
Patient's health	Intact immune system	Light smoker	Impaired immune system
Patients esthetic requirements	Low	Medium	High
Height of smile line	Low	Medium	High
Gingival biotype	Thick- "low scalloped"	Medium- "medium scalloped"	Thin- "high scalloped"
Shape of dental crowns	Rectangular		Triangular
Infection at implant site	None	Chronic	Acute
Bone height at adjacent tooth	≤ 5 mm from contact point	5.5 - 6.5 mm from contact point	≥ 7 mm from contact point
Restorative status of adjacent tooth	Intact		Restored
Width of tooth gap	1 tooth (≥ 7 m\m)	1 tooth (≤ 7 mm)	2 teeth or more
Soft tissue anatomy	Intact		Compromised
Bone anatomy of alveolar ridge	No defect	Horizontal defect	Vertical defect

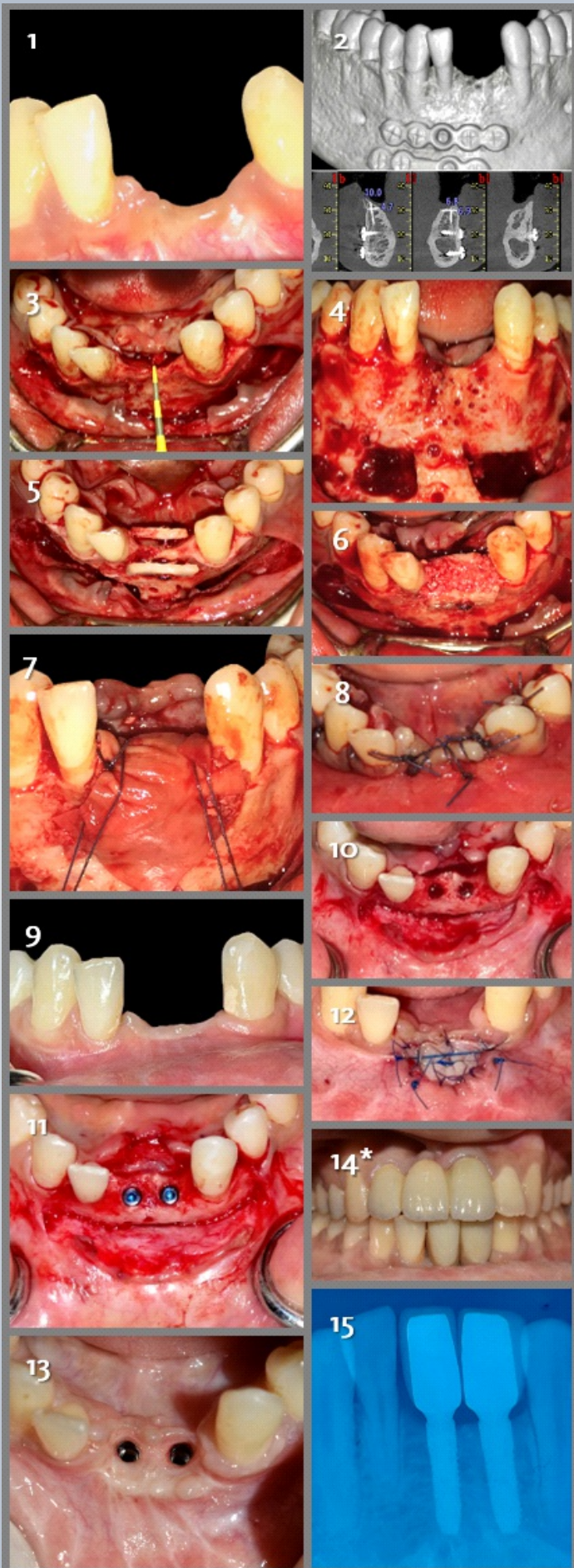


Dr. Saurabh Kamat, India

MDS (Oral & Maxillofacial Surgeon)

He is currently associated as Assistant Professor – Department of oral and maxillofacial Surgery at Goa Dental College and Hospital. He is co-founder of Southern Edge Education and Hon. Secretary of Goa chapter of AOMSI. He is inventor of SauFRa Technique, for Fixation of Resorbable Membranes in Horizontal Guided Bone Regeneration.

He has lectured at National & International conferences and has many publications in reputed journals to his credit. He also organizes various courses under the banner of Southern Edge Education.



The Approach

The goal of the treatment was to restore the function and esthetics of the patient, who lost his mandibular incisors following a road accident.

The Outcome

The horizontal and vertical bone dimensions were restored using the Khoury technique. This enabled the placement of 2 mandibular implants in a prosthetically correct position.

1. Pre-op clinical scenario - Missing 41,31,32 II 2. Pre-op CBCT showing insufficient crestal width and height for implant placement. II 3. Full thickness mucoperiosteal flap raised from distal of 43 to distal of 33. The crestal width was less than 1 mm. II 4. Titanium plates were removed and autogenous bone plates were harvested from parasymphysis region. II 5. Autogenous bone plates were positioned ligually and labially to the defect and fixed using a single 1.2mm self-drilling 14mm quadricortical screw. II 6. Geistlich Bio-Oss® small granules were mixed in a 1:1 ratio with autogenous bone chips and placed between the autogenous bone plates. II 7. Geistlich Bio-Gide® membrane secured using SauFRa technique. II 8. Primary Tension-Free closure achieved using 5-0 Vicryl sutures. II 9. Frontal view 7-months post-op. II 10. Bleeding Implant osteotomies showing evidence of vital bone formation. II 11. Two narrow diameter Implants placed. II 12. Two months after implant placement, the soft tissues around the implants were augmented with a Free Gingival Graft. II 13. Optimum keratinized gingiva developed around the implants. II 14. Three years Post prosthesis follow-up. II 15. 4 year post-prosthesis follow-up IOPA




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Keys to Success

- ✓ Perfect Immobilization/fixation of the Khoury plates.
- ✓ Tension-Free primary soft tissue closure.
- ✓ Combined use of Geistlich Bio-Oss® and autogenous bone chips in a 1:1 ratio for bone regeneration and volume maintenance.
- ✓ Use of Geistlich Bio-Gide® to avoid soft tissue ingression at grafted site.

 Khoury SBB technique for 3D Ridge Augmentation is an extremely technique sensitive surgical procedure. When performed using Geistlich Bio-Oss® and Geistlich Bio-Gide® this becomes a more predictable regenerative procedure to create sufficient ridge volume suitable for prosthetically driven implant placement.

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