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# BioBrief

Extraction Socket Management



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Dr. Alecsandru Ionescu, DDS, PhD

**Using the Golden  
Standard in open-healing  
technique: Geistlich Bio-Gide®**

## The Situation

The patient complained of “tooth mobility” that first occurred 3 months previously, after a sports accident that caused a trauma in that region. As he had no serious pain, he assumed that everything would go back to normal after a while. Clinical control and a CBCT scan were performed. After analyzing both

clinical and CBCT image data, the conclusion was that there was a root fracture at tooth 11, and, due to the root micro movement in the alveolar ridge together with the periodontal bacterial infiltration, the buccal bone was resorbed (type 2 class).

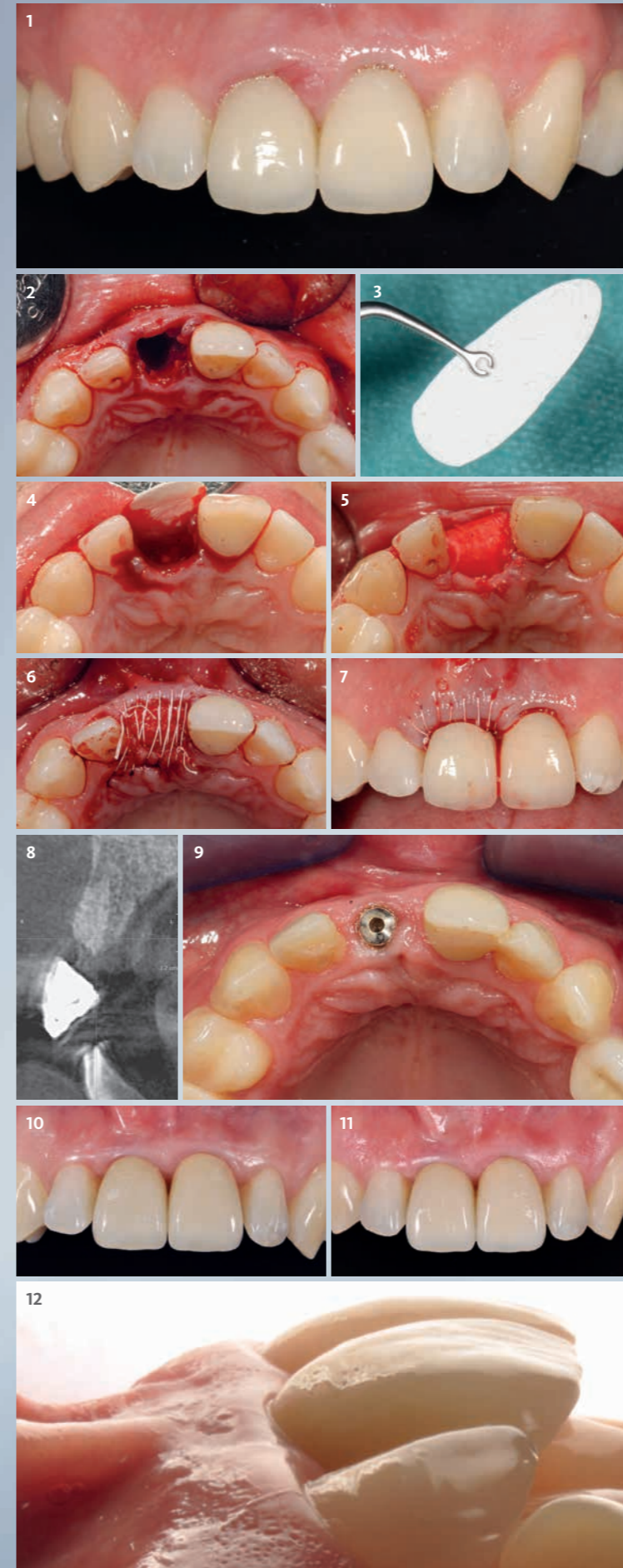
## The Risk Profile

	Low Risk	Medium Risk	High Risk
Patient's health	Intact immune system	Light smoker	Impaired immune system
Patient's 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	Oval	Triangular
Infection at implant sight	None	Chronic	Acute
Bone height at adjacent tooth site	≤ 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 mm)	1 tooth (≤ 7 mm)	2 teeth or more
Soft-tissue anatomy	Intact		Compromised
Bone anatomy of the alveolar ridge	No defect	Horizontal defect	Vertical defect



**Dr. Alexandru Ionescu, DDS, PhD** graduated from the Faculty of Dentistry of the “Carol Davila” University of Bucharest in 2001. He is a specialist in minimally invasive oral surgery and implantology. Dr. Ionescu received his PhD in Oral Implantology with his main research topic “Guided tissue regeneration using the open healing technique and flapless approach in implant patients”. He is involved in multiple studies and research projects related to minimally invasive oral surgery and implantology, periodontology and regenerative dentistry. Dr. Ionescu's lectures mainly focus on minimally invasive approaches in oral surgery and implantology. He is a trainer for the “open healing” protocol and minimally invasive techniques using soft tissue level implants. Dr. Ionescu works in Bucharest in his private dental clinic, research and training center “aesthetics ONE”.

A “backward planning” treatment concept was used for the right planning strategy in order to achieve a predictable esthetic and functional result.



## The Approach

Tooth 11 was extracted atraumatically and the socket preservation procedure was performed in accordance with the open-healing protocol. Geistlich Bio-Oss® and Geistlich Bio-Gide® were used. There was no flap raised, no periosteal incision, the membrane remained deliberately opened and a continuous PTFE suture at the free gingival margins (Coreflon, Poland) was performed to stabilize the membrane.

## The Outcome

Clinical control and CBCT scan showed long-term stability of soft and hard tissues. The final outcome was stable, from both functional and esthetic points of view, reinforcing the biological advantages using the open-healing technique followed by flapless tissue level implants in the esthetic zone.

| 1 Initial clinical situation: tooth #11 showed a mobility after a sport accident that caused a trauma in that area | 2 Atraumatic tooth extraction of tooth #11. The extraction socket showed a type 2 class trauma where the soft-tissue level remained virtually at the level of the adjacent teeth and the bone was lost almost up to the basilar bone | 3 A ridge preservation technique using the open-healing technique was chosen to preserve the ridge. Geistlich Bio-Gide® was shaped to fit the post-extraction socket | 4 Geistlich Bio-Gide® was inserted deeply into the extraction socket down to the basal bone. No flap and no periosteal incision were made | 5 The extraction socket was grafted with small Geistlich Bio-Oss® granules and highly condensed. Finally, Geistlich Bio-Gide® was folded over to protect the bone graft | 6 The collagen membrane remained purposefully open and was stabilized using continuous PTFE sutures at the free gingival margins (Coreflon) | 7 The old crown was used as a temporary restoration and attached to the neighboring teeth and a rubber dam was used to protect the Geistlich Bio-Gide® during adhesion | 8 CBCT scan, 6 months after ridge preservation using the open-healing approach. It was possible to regenerate sufficient hard tissue for implant placement | 9 In a second stage, flapless insertion of a tissue level implant was possible after 6 months | 10 Final restoration was 6 months after implant placement. Please keep in mind that this is a completely flapless approach in stages 1 and 2 | 11 3-years follow-up: the clinical situation remains stable | 12 3-years follow-up: lateral view at the implant site shows a stable esthetic result with a favorable ridge contour



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#### Manufacturer

Geistlich Pharma AG  
Business Unit Biomaterials  
Bahnhofstrasse 40  
6110 Wolhusen, Switzerland  
Phone +41 41 492 55 55  
Fax +41 41 492 56 39  
[www.geistlich-biomaterials.com](http://www.geistlich-biomaterials.com)

#### Affiliate Australia and New Zealand

Geistlich Pharma Australia and New Zealand  
The Zenith – Tower A  
Level 19, Suite 19.01  
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NSW 2067 Chatswood, Australia  
Phone +61 1800 776 326  
Fax +61 1800 709 698  
[info@geistlich.com.au](mailto:info@geistlich.com.au)  
[www.geistlich.com.au](http://www.geistlich.com.au)

#### Affiliate Great Britain and Ireland

Geistlich Sons Limited  
1st Floor, Thorley House  
Bailey Lane  
Manchester Airport  
Manchester M90 4AB, Great Britain  
Phone +44 161 490 2038  
Fax +44 161 498 6988  
[info@geistlich.co.uk](mailto:info@geistlich.co.uk)  
[www.geistlich.co.uk](http://www.geistlich.co.uk)

#### Affiliate North America

Geistlich Pharma North America Inc.  
202 Carnegie Center  
Princeton, NJ 08540 USA  
Phone toll-free +1 855 799 5500  
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[www.geistlich-na.com](http://www.geistlich-na.com)

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## Keys to Success

No flap

No incision in the periosteum

Membrane insertion inside the extraction socket

Bone granules to fix the membrane inside the extraction socket

Tension-free suturing

Continuous PTFE sutures



Ridge augmentation using the open-healing technique combined with Geistlich Bio-Oss® and Geistlich Bio-Gide® with tension-free continuous PTFE sutures as the *Golden Standard* without raising a flap is a predictable and minimally invasive regenerative procedure to create sufficient ridge volume suitable for prosthetically driven flapless implant placement with no additional soft tissue surgery needed.

Dr. Alecsandru Ionescu, DDS, PhD



#### REFERENCES

- 1 Ionescu A et al. Stoma Edu J 2019; 6(1): 36-41. (Clinical Study)