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CASE STUDY

# Restoration of two broken incisors- Unica Proximal

Courtesy of Dr. Monaldo Saracinelli
Italy

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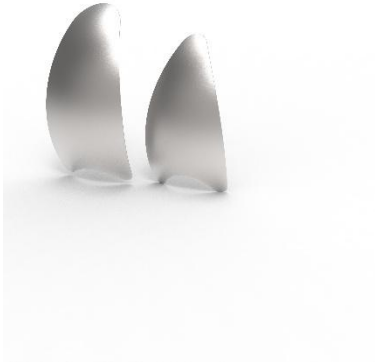
# Dr. Monaldo Saracinelli, Italy



Dr. Saracinelli is a highly experienced dental professional with a degree in Dentistry (with Laude) from the University of Siena (1985).
Has held multiple academic and teaching roles, including Student Trainer in Conservative Dentistry and Lecturer in Endodontics and Restorative Dentistry at the University of Siena.
Taught masticatory biomechanics, applied prosthetics, and odontostomatology in both technical secondary education and university-level nursing programs.
International academic experience includes lecturing roles at universities in France (Marseille and Montpellier) and Egypt (Pharos University, Alexandria).
Served as Visiting Professor at the University of Padua in postgraduate pediatric dentistry and early orthodontic treatments.
Author or co-author of several scientific publications and frequent lecturer at national and international congresses and courses, Dr. Saracinelli is an active member of StyleItaliano Group and currently maintains a private dental practice in Grosseto.

# product used

The Polydentia products used in this clinical case are:



## Unica proximal anterior matrices

Unica Proximal matrices are especially indicated for anterior restorations involving the proximal walls (Class III and IV, peg-shaped lateral incisors, diastema closures, partial and total veneering).
The easy-to-place cervical labiopalatal arch has the purpose of securing the matrix between the papilla and the tooth subgingivally, in order to improve matrix stability after placement.
Unica Proximal anterior matrices have been developed in cooperation with Style Italiano, a group of passionate clinicians and researchers, who are in constant development of materials and techniques for aesthetic and conservative dentistry. Their philosophy is based on developing solutions to make excellence in aestetic and functional dentistry attainable by all. For Polydentia, the collaboration with Style Italiano is more than just a source of inspiration. It is an opportunity to constantly renew its commitment to put excellence in Swiss manufacturing at the service of dentistry worldwide

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## Case report

The patient came to our attention due to a fracture of the two upper incisors 1.1 and 2.1 caused by trauma.

An initial radiological examination confirmed that the trauma did not extend to the root area of the tooth; we therefore decided to proceed with the restoration of the missing parts of the incisors using a direct composite technique.

The following case study shows the step-by-step direct restoration procedure using the Polydentia Unica proximal anterior matrix.

01



Pre-operative view evidencing the fractured incisors (1).

02



Pre-operative view evidencing the fractured incisors (2).

03



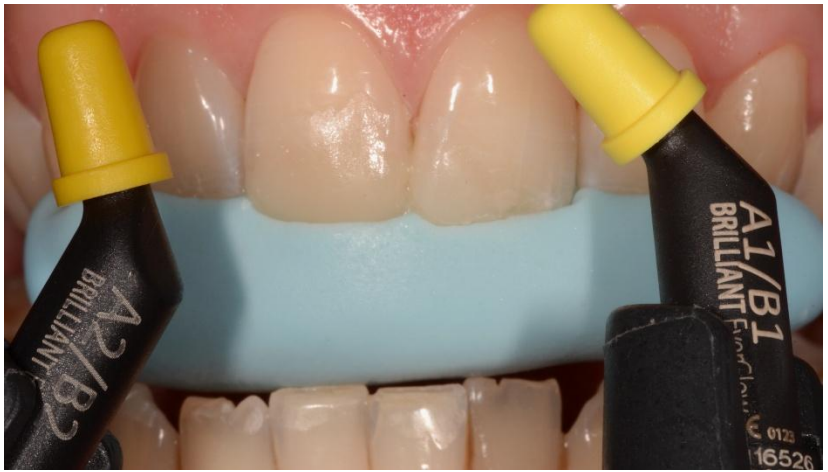
The trauma does not affect the roots, and the teeth respond normally to vitality tests.

04



The preoperative X-Ray view confirmed that the trauma did not extend to the root

05




The first step in achieving a successful aesthetic restoration is determining the correct shape and shade of the composite material. First, a mock-up was created to verify the shape of the restoration according to its function, as well as the most appropriate shade of composite. After functional testing, a silicone stent was created based on the mock up

06



Copy of the mock up.

07



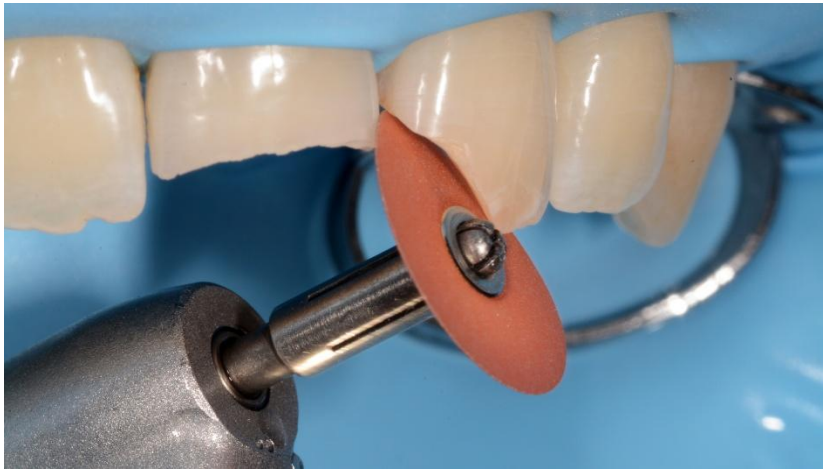

A close comparison of the two shade of composite. Material choice was done according to the natural color of the teeth

08



Pre-operative situation under rubber dam isolation.

09



Accurate margin condition is an essential requirement to obtain strong composite adhesion: smoothing of the rough palatal surfaces using a middle grit abrasive disk

10



Smoothing and preparation of the labial surfaces with a long chamfer (45°) between enamel and dentin

11



Marking the limit of the palatal margin with a thin sharp instrument on the silicone key which will serve as a reference point for subsequent restoration steps.

12



Etching procedure using 37% Orthophosphoric acid for 30sec.

13



Bonding application; many layers of adhesive were applied using a brush to obtain an uniform coverage of the fractured surfaces

14



Light curing of the bonding for 40 sec .

15




A2 / B2 composite shade was chosen for this restoration; a first layer was applied directly to the silicone key and will be used to create the palatal shells .

16



The palatal shells were light-cured. A spatula was used to separate tooth 12, leaving the necessary space for the matrix

17



Incisors 11 and 21 after palatal shells built up

18



Dry shaping of the incisal and interproximal contours of the palatal walls using an abrasive disc and strip.

19




We decided to use Unica Proximal sectional matrices to restore the missing parts of incisors 11 and 21. Thanks to its shape, the Unica Proximal can be positioned and stabilized between the tooth and the papilla without the need for a wedge. Its curvature also allows for the easy restoration of the anterior teeth's interproximal morphology.

20



Frontal view of the incisors with Unica Proximal matrices in place; no wedge was used to stabilize the matrices.

21




Build up of the interproximal walls

22



The situation after build up of the interproximal walls and matrix removal to achieve a better access to the cavities

23



The labial surfaces were restored using A2B2 composite

24



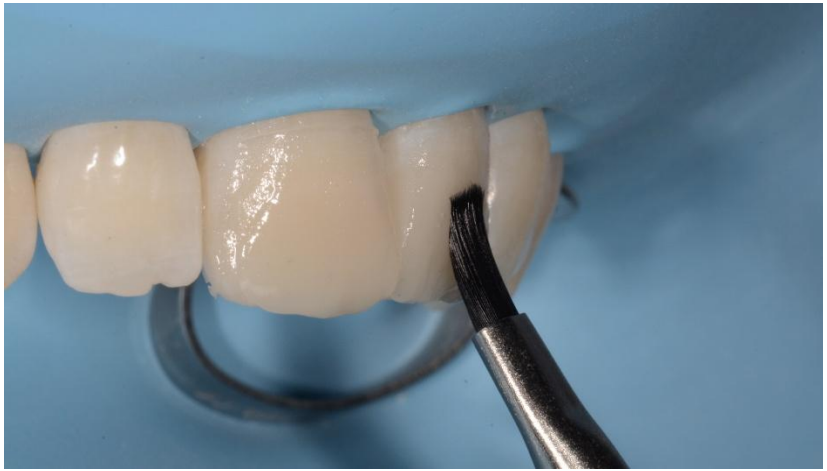

Clinical situation after labial surface build up and insertion of some stains to imitate the nature

25



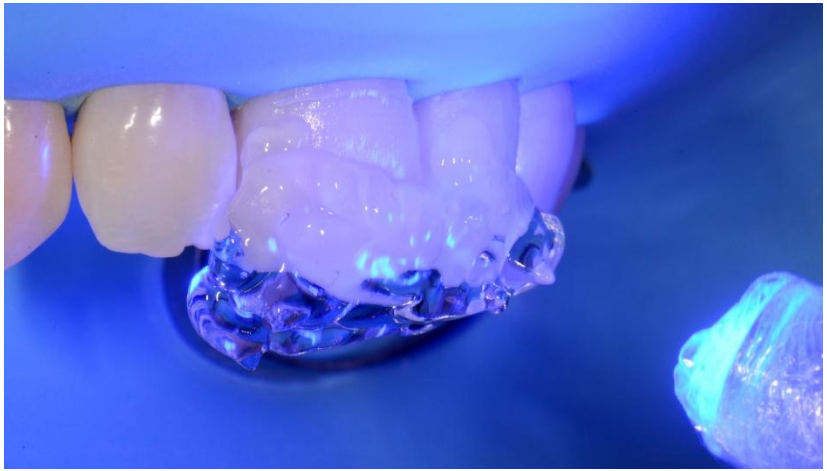

A thin layer of translucent, high-value enamel composite was used to enhance the depth effect of the restoration.

26



A brush was used to smooth out and remove any excess of composite before it was cured.

27



Light curing: after the final polymerization of all the composite, a second step was performed using ultrasound gel to avoid contact between the composite and oxygen, thus maximising the conversion of the composite.

28



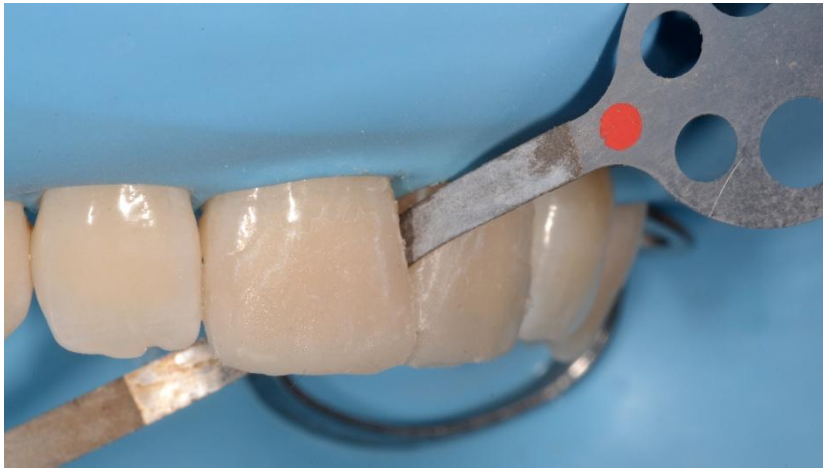
Removal of excess adhesive residue

29



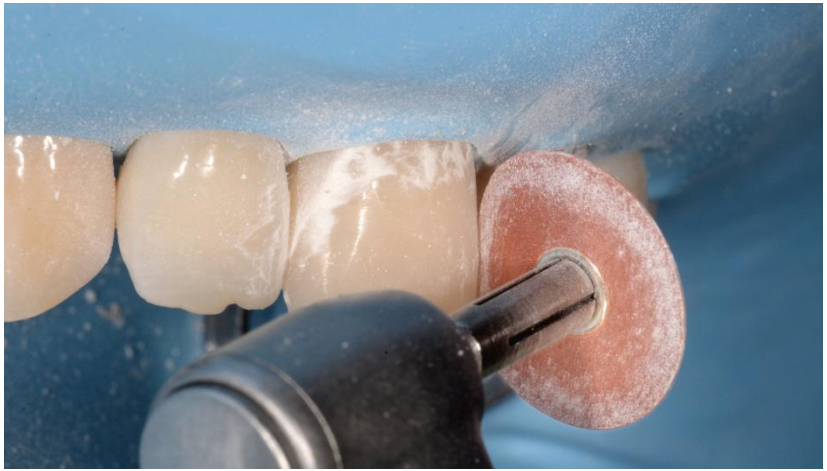
Finishing of the palatal surfaces

30



Finishing the interproximal anatomy looking for transition lines (1)

31



Finishing the interproximal anatomy looking for transition lines (2)

32



A drill was used to create grooves and mamelons.

33



Polishing process

34



The restoration after polishing the labial surfaces.

35



The final outcome, front view

36



Lateral view of the final outcome.

37



Final x-ray.

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## Conclusion

Unica Proximal is a smart solution for everyday direct aesthetic and functional anterior restorations. It is particularly well-suited to class III and IV carious lesions. In this case, we used the Polydentia Unica Proximal matrix to help build the interproximal walls when reconstructing the two fractured maxillary incisors, thereby restoring the function and aesthetics of the upper arch.

clinical case courtesy of
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# thanks for your attention!


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