

Replacement of old Amalgams with myRing Classico and Diamond²⁴

Procedure/Study by

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Diamond²⁴

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Dr. Chiodera graduated in Dentistry at the University of Brescia.
In year 2004 he won a scholarship at Kings College University of London.

Member of Style Italiano, Dr. Chiodera is having a private practice in Italy since 2006 and his practice is mainly dedicated to conservative dentistry and endodontics.

Dr. Chiodera is also very active as author of National and International Journal articles, as well as Lecturer in many Universities.

Case Report

The patient came to our attention for a regular check. A first analysis revealed multiple carious lesion under a previous amalgam on both molars 26 and 27 and second bicuspid 25. We decided to proceed to the elimination of the old amalgams and carious lesion followed by a direct composite restoration of the cavities.

The following case shows the step-by-step restoration procedure using Polydentia myRing Classico separator ring equipped with the new Diamond²⁴ silicone tubes.



01

Pre-operative view of 26 and 27 molars and 25 bicuspid showing the old amalgam restorations which need replacement.



02

The quadrant under isolation before removing the old restorations.



03

Wedging and cavity preparation: a standard wooden wedge was used to separate bicuspid 25 and molar 26, while a Macro Wedge by Polydentia was used to separate the molars. Macro Wedge wedges are very effective in case of wide cervical spaces, where the size of standard wedges is not enough to ensure a correct teeth separation. The old amalgams have been then removed.



04

Bicuspid and second molar were restored first. As a first step, a LumiContrast matrix (Polydentia) was placed prior to etching procedure. A steel matrix strip was also used to protect the first bicuspid. Cavities on both #25 and #27 were filled with composite, cured and then finished.

05



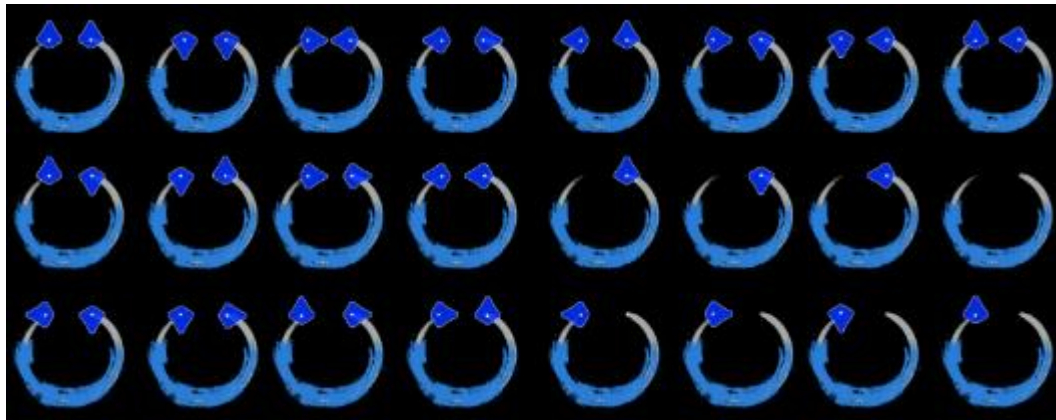
The clinical situation after restoration of premolar 25 and molar 27. After that we focused on the MOD restoration of molar 26. As first the cavity was cleaned using air abrasion and disinfected. The wooden wedge was broken in order to better accommodate myRing Classico with Diamond²⁴ (Polydentia). This trick is very helpful in case of small teeth.

06



Two LumiContrast matrices were placed on first molar. The Macro Wedge was shaped for better positioning and avoid the matrix to collapse on the cervical area.

07



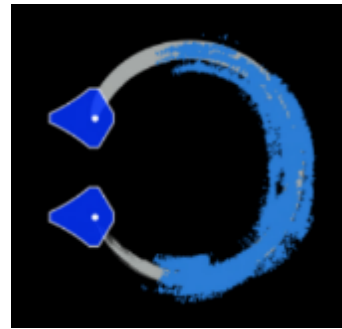
The different 24 combinations offered by Diamond²⁴ and myRing Classico on a single image; the new silicon tines can be oriented and combined ensuring an optimal adaption of the matrix to the tooth surfaces.

08



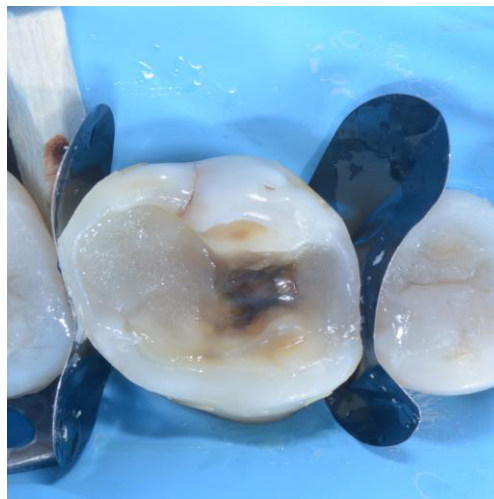
The cavity equipped with myRing Classico and Diamond²⁴ on distal. By orienting and combining the silicon tines, the ring can be "semi customized" ensuring an optimal adaption of the matrix to the tooth surfaces.

09



After restoration of the distal interproximal wall, myRing Classico was moved to the mesial wall. In this case two Diamond²⁴ were used; different edges length has been especially developed to ensure the best adaption to the matrix even in case of teeth with different dimensions. This feature ensures a faithful contact point restoration.

10



#26 after restoration of the distal interproximal wall; myRing Classico was removed and LumiContrast sectional matrices detached. The picture highlights the optimal adaption of the Diamond²⁴ to the proximal walls, which ensure a perfect contact point restoration with just minor finishing required.



11

The restoration after filling of the occlusal cavity and composite modeling.



12

Immediate post-operative result

Conclusion

An accurate reproduction of the contact point and proximal walls is a must in class II restorations. Many different sectional matrix rings have been developed to help dentists to achieve perfect restorations. Combining myRing Classico with the new Diamond²⁴ offers additional flexibility in adapting the sectional matrix system to the clinical situation. Particularly, the 24 possible combinations of size and shape of Diamond²⁴ allow to “semi customize” the ring and adapt the matrix in a very efficient way without damaging and collapsing it on the cavity, even in case of difficult tooth morphologies.