

Replacement of an old amalgam and restoration of Class II cavities

Procedure/Study by

Dr. Giuseppe Chiodera, Brescia - Italy

**myRing Forte with
myTines Large & myTines Small**



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 runs a private practice mainly dedicated to conservative dentistry and endodontics, in Italy since 2006.

Dr. Chiodera is also a very active author of national and international Journal articles, as well as lecturer in many universities.

Case Report

The patient came to our attention for the replacement of an old amalgam on molar 26. The most common problems when threatening old metal fillings are cracks which can develop on the tooth structure, especially on the crowns. Cracks are mainly due to the combination of two factors, the invasive preparation needed before placing an amalgam which weakens the tooth structure and the difference in thermal expansion coefficients between the metal filling and the tooth. When, for instance, a hot food is eaten, the metal filling and the tooth expand at different rates, as a matter of fact the amalgam expands more quickly applying pressure on the tooth. The cyclic application of pressure over the years can lead to the development of cracks and possible cusp fractures once the filling is removed.

The following images show the step-by-step direct composite restoration procedure using myQuickmat Forte kit (Polydentia) in combination of the myTines Small and myTines Large (Polydentia). The myTines Large are a very useful tools when restoring wide cavities even in case of a missing cusp. The semi-rigid structure of the extremities allows the reconstruction of large portion of the tooth without collapsing the matrix into the cavity.

01



Pre-operative view showing the old amalgam and composite restorations to be replaced.

02



The quadrant under isolation.

03



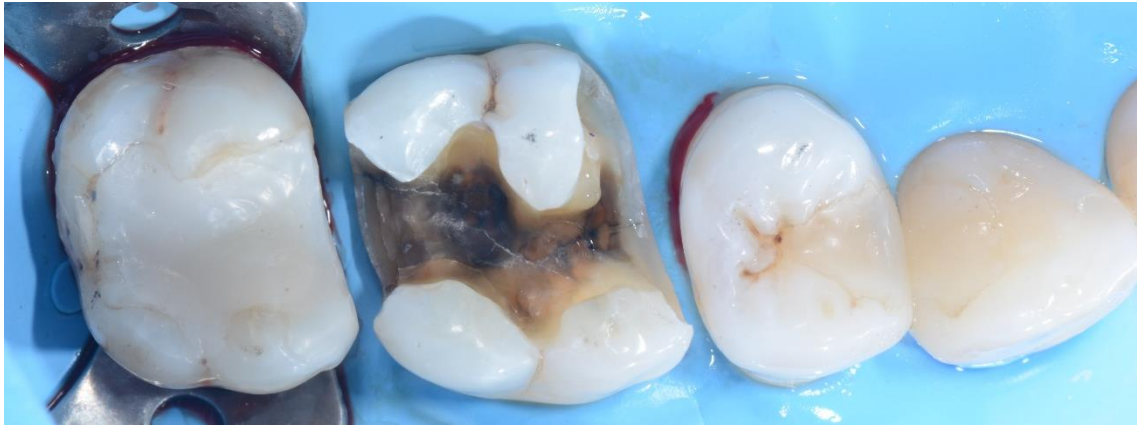
Pre-wedging: Wood wedges were cut to better accommodate the ring.

04



Molar 26 after the elimination of the old amalgam and composite restorations. Removal of previous metal filling often leads to wide cavities which requires special tools for the direct composite restoration. For the present case, the extremities myTines Large in combination with myRing Forte were used.

05



The cavity after cleaning and disinfection.

06



Etching of the enamel. Two LumiContrast matrices were placed on mesial and distal sides to protect the adjacent teeth from the orthophosphoric acid.



07

myRing Forte in combination with the extremities myTines Large placed on the tooth before proceeding with the reconstruction of the mesial proximal wall. The semi-rigid, asymmetric geometry of myTines Large ensures an improved stability of the ring even when a cusp is missing. The extremities can also be inverted to increase matrix adaptation of wide cavities on both mesial and distal sides of the tooth.



08

Restoration of the mesial proximal wall.



09

myRing forte was then removed from the tooth and moved in order to proceed with the restoration of the distal interproximal wall. In this case the reduced size of the cavity makes the extremities myTines Small the best solution for a correct restoration of the contact point.



10

#26 after restoration of both interproximal walls before reconstruction of the occlusal surface.

11



The clinical situation after the restoration of the occlusal surface before finishing and polishing.

12



Post-operative view of the restoration.

Conclusion

Replacing old amalgams often leads to extensive cavity preparations. Restorations of these lesions won't be successful if the dentist uses inappropriate tools. The new ring extremities from Polydentia, myTines Small and Large, can be mounted on the same separator ring, and when coupled with myRing Forte, the sectional matrix system becomes an excellent restorative device. The combination of Polydentia conservative solutions permitted me to achieve a natural looking and functionally correct restoration in this case with different cavity widths.