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**CLASS II: CAVITY AND MATRIX  
OPTIMIZATION**

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A step by step procedure for posterior direct restorations can help the dentist to obtain best result in daily dental practice. Small details in cavity preparation and matrix adjustment to enhance by little details the everyday outcome of simple restorations.



1.- The first premolar has an old composite restoration, poor contact point in the distal and secondary decay



2.- Always before inter proximal intervention, a wedge must be placed in order to protect, define the margin level and start separating the teeth. After the removal of the old composite restoration decay was found and must be thoroughly removed.



3.- The disto-vestibulo wall was too close to the second premolar, so using a fine bur a very conservative separation was done. This separation is very important for the correct adaptation of the matrix and the margin location of the final restoration, in an area that will be easily accessible and controllable.

The cervical margin ideally must be at the level of the wedge, this area has generally the best matrix adaptation.



Fig 4.- Adaptation of the matrix using a ring and teflon. The teflon was applied before the insertion of the ring. Using teflon in this case provided a better fit of the matrix while maintaining a strong pressure which will deliver a strong contact point as long as there exists an physical contact of the matrix with the neighbour tooth.



Fig 5.- The first step of the layering is to construct the proximal ridge with a thin wall of composite, using as a reference the marginal ridge of the second premolar.



Fig 6.- Final aspect after the last layer application and before finishing and polishing. Small amount of stain was used to have a better aesthetic integration.



Fig 7.- Detail of the anatomy with another view angle which helps as well detecting excess and under filling.



Fig 8.- Angle change to detect slight excess over the palatal cusp.



Fig 9.- Occlusal check is performed immediately after rubber dam removal. Finishing and polishing are carried out after this step.



Fig 10.- With the use of discs, delicate abrasive rubber points and natural brush bristles with paste, the final gloss and anatomy of the restoration is achieved.

Better results in our dental practice can be achieved when a predictable protocol is applied, regardless of the layering technique, modelling technique and the amount of colors used. If the margins have an ideal location and the matrix is perfectly fitted, the longevity of the restoration will increase importantly.

#### References

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- 2.- Ferraris F. Adhesion, layering, and finishing of resin composite restorations for class II cavity preparations. Eur J Esthet Dent. 2007 Summer;2(2):210-21.

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