

“Restoring Proximal Contacts of Teeth”

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Abstract: Matrices are used whenever one or more walls of the tooth are missing. They help to establish the proper anatomic contour and proximal contacts without gingival overhangs. There are several designs of matrices available for different clinical situations. They may range from a simple metal or plastic strip to a circumferential band of metal encircling the entire crown depending on the extent of tooth destruction.

Keywords: Matrix, band, Retainer, Proximal contact, Wedges

I. Introduction

The presence of proper proximal contact and contour is important to maintain stability and occlusal harmony. A thorough knowledge about contacts and contours of various teeth is mandatory for understanding

- The predisposing factors of proximal caries like faulty interrelationships.
- The significance of marginal ridges, embrasures, for re-establishing form and function of the restored teeth.
- Periodontal aspect and health of the tooth to be restored.

1.1 Proximal Contact Areas

Proximal contact area denotes the area of proximal height of contour of the mesial or distal surface of a tooth that touches (contacts) its adjacent tooth in the same arch. Initially after tooth eruption there is only one point of contact known as proximal contact point but due to wear during physiologic tooth movement the proximal contact point becomes proximal contact area.

The Location Of Proximal Contact Area Is Normally:

Maxillary and mandibular anteriors- Incisal third and is positioned slightly facial.

Maxillary and mandibular posteriors- Near the junction of the occlusal and middle thirds or in the middle third.

1.2 Benefits Of An Ideal Contact And Contour

- Conserves the health of the periodontium
- Prevents food impaction
- Makes the area self cleansable
- Improves the longevity of proximal restorations
- Maintains the normal mesiodistal relationship of the teeth in the dental arch.

1.3 Matricing

In case of large missing wall of the tooth, support has to be provided while placing and condensing the restorative material. Usually a metallic strip serve this function and is known as the matrix band. Matrix band which forms the temporary walls is held in place by means of a matrix band retainer which may be a mechanical device, floss, wire, or impression materials etc

Matricing is the procedure by which a temporary wall is built opposite to the axial wall, surrounding the tooth structure which has been lost during the tooth preparation.

Matrix is an instrument which is used to hold the restoration within the tooth while it is setting.

Ideal Requirements of a Matrix

- * Ease of application
- * Not be cumbersome
- * Ease of removal
- * Rigidity
- * Provide proper proximal contact and contour
- * Positive proximal pressure
- * Non-reactive
- * Inexpensive

Functions of Matrix

- To confine the restoration during setting
- To provide proper proximal contact and contour
- To provide optimal surface texture for restoration

The matrix usually is applied and stabilized with a wedge that create rapid separation during tooth preparation and restoration.

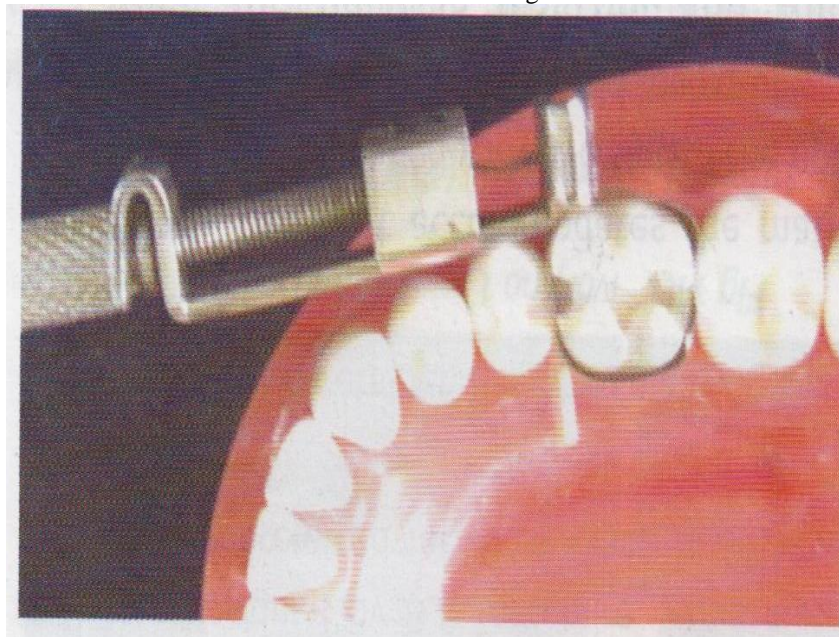
Parts of a Matrix

There Are Two Basic Parts In A Matrix

- 1) Band
- 2) Retainer

Band is a piece of metal or polymeric material used to support and give form to the restorative material during its insertion and hardening. Retainer is a device by which the band can be maintained in its designated position and shape.

Tofflemaire Matrix with wedge in Place



Matrices can be classified by several ways.

They include

- a. Depending on the type of band material
- b. Depending on its preparation
- c. Depending on the mode of retention
- d. Depending on the cavity preparation for which it is used

Functions of wedges

- Help in rapid separation of teeth
- Prevent gingival overhang of restoration
- Provide space to compensate for thickness of matrix band
- Help in stabilization of retainer and matrix during restorative procedures
- Atraumatically retract the rubberdam and gingival from the gingival margins of proximal tooth preparations

Wooden Wedges



Plastic wedges



Choice of wedge in different situations

1. Wooden

Round:- Ideal class 11 preparations

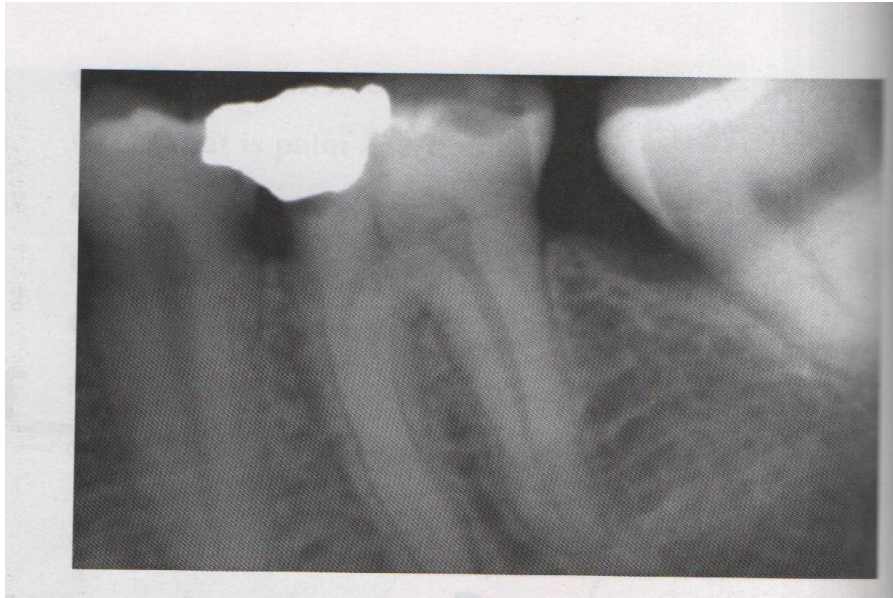
Triangular:- Class 11 preparations with deep gingival margins

Light- transmitting – class 11 composite restorations along with transparent matrices.

Light-transmitting wedges



Radiograph showing incorrectly done Proximal restoration



VI, Conclusion

The importance of proper contours and contacts of a restoration cannot be underestimated. This enhances correct occlusion and sound periodontal health while preventing gingival overhang. Matricing is a vital step during the placement of different restorations. Several matrix systems are currently available. The clinician should employ the best matrix indicated for a given clinical situation. Selection of the matrix should be based on its ease of use and efficiency to provide the optimum contacts and contours.

Declaration

I hereby declare that I am (Author) solely responsible for the study and contents of the following manuscript.

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