Orthodontic Band Selection and Placement

Authored by:

Dr. Khushee Sharma

Introduction

In modern orthodontic practice, it is possible to use bonded attachments on all teeth to be moved, however, there are some instances when the placement of bands on the molars or premolars is preferable to the use of bonded attachments, for example:

- With partially erupted teeth which may be difficult to isolate
- When auxiliary appliances such as headgear, lingual arches or quad helices are required
- For teeth with large amalgam restorations

Orthodontic bands are made from stainless steel and are cemented in place with glass ionomer cements. Glass ionomer is the cement of choice due to its fluoride releasing properties.

First appointment: Placement of separators

During the first appointment, separators are placed in anticipation of bands in order to create space for the bands to be seated. They are placed through the interproximal contact of the tooth to be banded.

For this procedure you will need:

- 2 pieces of floss approximately 12 inches long
- 2 Mathieus pliers or separating pliers
- A separating module
- A mouth mirror
- A periodontal probe

Procedure:

The procedure involves stretching the elastomeric separator and then placing it between the interproximal contact point so that half of the separator is below the contact point and the other half is above the contact point and visible occlusally.

In your notes for the patient, be sure to indicate how many separators were placed and their location. Also, be sure to inform the patient that they may have some discomfort in the days immediately following the placement of the separators; you may warn them that it may feel as though they have some popcorn stuck between their teeth.

Instruct the patient to avoid eating sticky foods and chewing gum.

The patient is seen one week later for band selection.

Second Appointment:

Once space has been created, the correct size band can be selected for the patient during the second appointment.

For this procedure you will need:

- The patient's study models
- A band pusher
- A bite stick
- A band remover
- A Mitchell trimmer
- Floss
- A prophy cup
- Pumice
- Cotton rolls
- A cheek retractor
- Glass ionomer cement
- A glass slab
- A mixing spatula

Procedure for band selection:

To begin this procedure, first remove the separators with the periodontal probe. If any of the separators are missing make sure you are able to account for them as they may have fallen out in the intervening time period or as they may have slipped between the contact points and become submerged. An indication that the separators have become submerged is redness or swelling of the gingiva.

Use the patient's study models to estimate the size of the band that you will need. Orthodontic bands come in a variety of sizes. The tooth number and band size are etched onto the mesial surface of the band.

You may need to try a couple of band sizes in the patient's mouth before you find the correct size for your patient. A well-fitting band will not be too loose but will have sufficient space for the placement band cement. Once you have found the correct size of the band, be sure to write this in the patient's notes for future reference.

Bands should be placed so that the slot height of the band is in the middle of the tooth and so that there is an equal amount of cuspal show from the buccal and lingual aspect of the tooth. It is important to note that there may be a clinical reason for altering the position of the band. You will be advised by your instructor if an alteration in band placement is necessary.

When viewed from the occlusal, the band should fit the contours of the tooth. For an upper molar, the indentation on the buccal aspect of the band should fit in the buccal groove of the tooth and for a mandibular molar the indentation should fit in the mesio-buccal groove of that tooth.

When seating the band onto the patient's tooth, use finger pressure initially to seat the band, then use force from the patient biting on the bite stick. If necessary you may also need to use the band pusher to guide the band into its correct position. Remember, the object is to seat the band properly not to seat it as far down as it will go. A word of caution when using the band pusher, only use on mesial or distal not on buccal or lingual.

Procedure for band cementation glass ionomer:

Once the bands have been selected dry their interiors with a cotton roll or gauze and set them aside.

Pumice the teeth which will be banded in order to remove the pellicle from the surface of the teeth.

Mix the glass ionomer cement on the glass slab with the mixing spatula. Incorporate enough powder into the liquid until the cement has a stringy consistency.

Use the mixing spatula to fully cover the interior surface of the band, making sure the cement does not spill over onto the outer surface of the band and occlude the slot into which the arch wire will be placed.

Place the band on the tooth and seat it into its ideal position using the band pusher and bite stick as needed. Wipe away the excess cement with a gauze or cotton roll before the cement sets. Once the cement has set, any excess can be removed with a Mitchell trimmer or with some knotted floss passed through the interproximal contact point.

Once all of the bands are cemented you can now proceed with the next stage of your patients orthodontic appliance construction. The bands will stay on until treatment is completed in about 12 to 18 months.

Article Reviewed By

Dr. Bryan Tompson & Dr. Bill Wilson