

TECHNIQUE CLINIC

Esthetic and Hygienic Ligation

This method places a continuous ligation wire beneath the main archwire in the bracket slots, so that the ligation wire is virtually invisible (Fig. 1). We use .009" or narrower ligation wires with .018" brackets and .011" or narrower wires with .022" brackets.

Taking the maxillary incisor segment as an example, the technique is as follows:

1. Wrap the ligation wire around one lateral incisor bracket's tie wings from the mesial (Fig. 2A).
2. Run the ligation wire from the distal of the same lateral incisor bracket slot through the remaining anterior bracket slots, ending at the distal of the opposite lateral incisor bracket (Fig. 2B).
3. Wrap this end around the lateral incisor bracket from gingival to occlusal, until it reaches the distocclusal edge of the bracket (Fig. 2C).
4. Run the other end of the ligation wire from the distal of the initial lateral incisor bracket slot through the remaining anterior bracket slots, until it meets the previous end of the wire (Fig. 2D).
5. Stretch both ends so that the two segments of ligation wire lie flat and parallel in the bracket slots. Tie the ends together (Fig. 2E).
6. Place the main archwire in the slots over the ligation wire, and tie it in as usual (Fig. 2F).



Fig. 1 A. Ligation from maxillary right lateral incisor to left lateral incisor. B. Main archwire tied in above ligation wire.

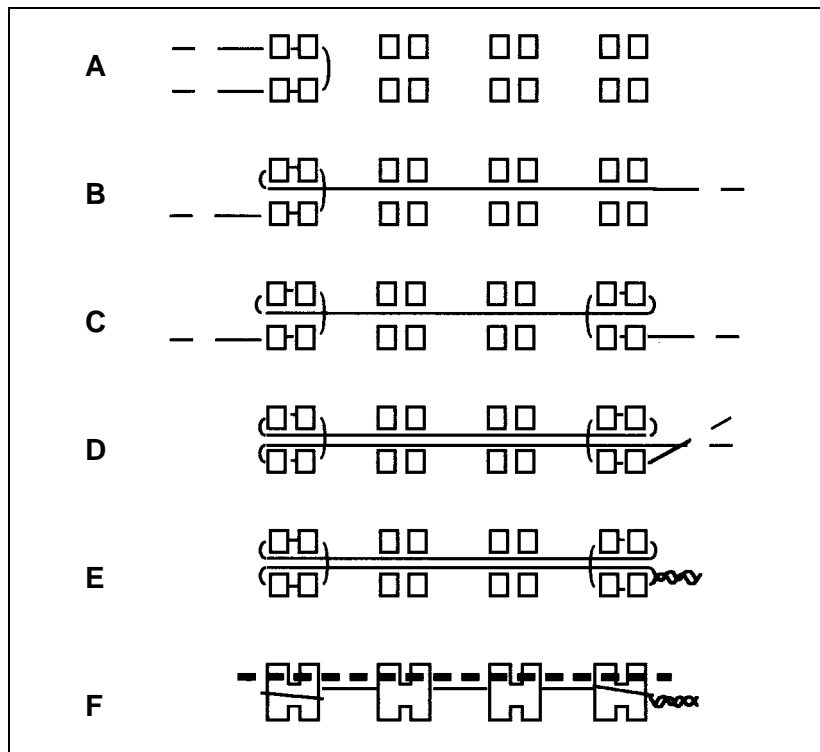


Fig. 2 A-E. Placement of ligation wire in maxillary incisor segment. F. Cross-section after placement of main archwire (bold dashed line).

Because the main archwire does not directly contact the bases of the bracket slots, it could cause some minor lingual tipping, which can be compensated for after the continuous ligation is removed. In addition, it is not possible to fill the slots with full-size archwires with the ligature wires beneath them.

We have used this method for several years and have found that, in addition to being esthetic, it is also more hygienic, because food rarely sticks to the ligature wire. The wire is durable enough that it does not need to be replaced at every visit.



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