



KG's Modification of the Crown and Loop: A New Approach to Space Maintenance

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Abstract

This manuscript describes the use of an innovative space maintainer that combines elements of both the crown and loop and the lingual arch., which might have to be done in a specific case scenario as explained.

Keywords: *crown and loop, lingual arch, space maintainers, pediatric dentistry.*

INTRODUCTION

The band and loop are a widely used fixed space maintainer, renowned for its versatility. It can be employed in either dental arch and is effective in both unilateral and bilateral cases¹. Over time, numerous modifications of this widely used appliance have been documented² like reverse band and loop, crown and loop. Crown and loop consist of a crown placed on a tooth adjacent to the space left by the missing molar, connected by a loop of wire that holds the adjacent teeth in place. The crown protects the remaining structure of a damaged tooth or a tooth with a large cavity and allows it to function normally.

The lingual arch is a fixed appliance that spans across the lingual surfaces of the mandibular teeth, typically anchored on the first permanent molars. It helps in maintaining space by preventing the adjacent teeth from drifting into the space left by the lost primary molars³. It is particularly useful when there is a need to maintain space for several teeth, not just one.

THE KGs MODIFICATION

When combining elements of the lingual arch with the crown and loop, it's crucial to remember that the permanent first molar is not fully erupted. After the extraction of the primary first and second molars unilaterally, guidance for the eruption of the permanent molar is lost on that particular quadrant. Therefore, the arm of the lingual arch is modified to encircle the mesial marginal ridge of the erupting permanent molar, thereby preventing its mesial migration.

However, in cases of unilateral loss of the primary first and second molars where the permanent molar is either not fully erupted or in the process of erupting, and the primary first molar on the contralateral side is extracted or lost, a lingual arm is extended from the band and loop appliance. This approach helps maintain space for the premolars and prevents the mesial migration of the permanent molar. To ensure the success of fabricating this appliance, achieving proper occlusion is essential. Therefore, we always recommend taking impressions of both arches to obtain well-aligned models.

CONCLUSION

By successful implementation of these space maintainers appropriately, dental professionals can ensure the preservation of dental arch integrity and support the healthy development of permanent teeth, ultimately contributing to the long-term dental health and alignment of their patients.

FIGURES



FIGURE_1: SHOWS EARLY BILATERAL LOSS OF PRIMARY FIRST MOLAR AND UNILATERAL LOSS OF PRIMARY SECOND MOLAR



FIGURE_2: SHOWS AN INNOVATIVE SPACE MAINTAINER 'KGs MODIFICATION OF CROWN AND LOOP'

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