

Clinical Pearl

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Modified Lingual Arch for Space Maintenance in Missing Mandibular Teeth

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ABSTRACT

Loss of permanent teeth due to caries has become prevalent in dental patients. Hence, in orthodontic treatment planning these spaces are either closed or maintained for prosthesis. Presented in this article is an innovative, modified lingual arch which offers space maintenance for prosthetic rehabilitation of missing mandibular first molars. It is not only easy but quick to fabricate too.

KEY WORDS – Space maintenance, Modified lingual arch

INTRODUCTION

Space maintainers are fixed or removable appliances used to preserve arch length following the premature loss or elective extraction of a tooth/teeth¹.

The severity and prevalence of dental caries has declined during the last few years. Yet in many countries it is still a serious health issue, causing the loss of teeth². The pattern of loss of teeth depends on many factors including age, stage of development of dentition, time of exfoliation, the presence of crowding or spacing and occlusal relationships. Thus, managing spaces in the dentition is one of the major concerns in orthodontics.

Often orthodontic cases imply closure of spaces and thus aiding us in functional and occlusal harmony, but do we need to demean all the spaces we have got! After all we need to broaden our treatment planning to enhance the overall oral health of the patients as dental surgeons.

This article presents a modified lingual arch for space maintenance where the spaces are maintained for prosthetic rehabilitation of missing first molar as this is important for function and occlusion.

Space maintainers are broadly classified as:

- Removable, fixed or semi-fixed
- Functional or non-functional
- Active or passive
- Unilateral or Bilateral

- Combination of above

INDICATIONS

- 1) To prevent drifting, tipping of teeth and to maintain the space
- 2) To prevent loss of arch length
- 3) To prevent midline shifts because of unilateral loss of deciduous tooth/teeth
- 4) For rotation correction

FABRICATION

Alginate impression was taken after band pinching. Stone cast was prepared over which wire component of modified lingual arch for space maintenance was prepared in edentulous area bilaterally from 19-gauge stainless steel wire (fig 1). Wire component of lingual arch space maintainer was soldered to bands on permanent 2nd mandibular molars bilaterally. Using luting glass ionomer cement, the prepared modified lingual arch space maintainer was cemented over permanent 2nd mandibular molars (fig.2)



Fig.1



Fig. 2

ADVANTAGES

1. It saves time, can be prepared chairside and usually takes few minutes for preparation.
2. Act as anchorage along with space maintenance
3. Requires minimal patient cooperation
4. Continuous action due to 24 hours wearability
5. Simple and delicate design
6. No hindrance to oral functions particularly tongue movements.
7. It is placed lingually so this appliance is virtually invisible.

COMPLICATIONS

1. Overgrowth of mucosa due to clinician overlook or failed visits.
2. Allergy to cobalt content of the wire alloy.

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