

## Research Letter

**\*Corresponding author**  
**Vivek Agarwal, BDS, MDS**  
Reader

Department of Orthodontics and  
Dentofacial Orthopaedics  
Haldia Institute of Dental Sciences  
and Research, Balughata  
Haldia, West Bengal, India  
E-mail: [drvivekagarwal@gmail.com](mailto:drvivekagarwal@gmail.com)

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# Churro Jumper Arch: A Modified Approach to Improve Efficiency

**Vivek Agarwal, BDS, MDS<sup>1\*</sup>; Rohit Kulshrestha, BDS, MDS<sup>2</sup>**

<sup>1</sup>Reader, Department of Orthodontics and Dentofacial Orthopaedics, Haldia Institute of Dental Sciences and Research, Balughata, Haldia, West Bengal, India

<sup>2</sup>Consulting Orthodontist, Private Practice, Mumbai, Maharashtra, India

## ABSTRACT

In this clinical innovation the Churro jumper has been modified, by inserting it on an auxillary wire which is placed on the mandibular arch, instead of directly placing it on the main arch wire, to improve its efficiency.

**KEYWORDS:** Churro jumper; Utility arch; Class II Malocclusion.

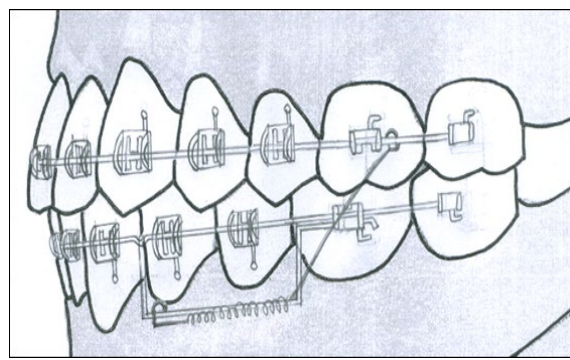
## INTRODUCTION

Treating a Class II patient has always been a challenge to the orthodontist, especially in non-compliant adolescents. The Churro jumper, when used as a Class II corrector, can be used unilaterally or bilaterally, is cost effective and can also be used for correction of Class III malocclusion.<sup>1-3</sup> In this article the Churro jumper has been modified, by inserting it on an auxillary wire which is placed on the mandibular arch, instead of directly placing it on the main arch wire, to improve its efficiency. This technique prevents loss of alignment of the bicuspids and subsequently reduces treatment duration which would have been required for stepping down the arch wire for picking up the premolar.

## PROCEDURE

- The traditional Churro jumper is fabricated in 0.028" wire and polyvinyl impression material is filled in the lumen of the jumper .
- An auxillary wire of dimension 0.019"×0.025" stainless steel was placed in the mandibular arch. It consisted of (a) molar segment inserted into the mandibular auxillary slot, (b) a posterior vertical segment which is formed (length as determined by the vestibular depth) by making a 90° bend gingivally, (c) a vestibular segment which bypasses the premolar brackets, and (d) an anterior vertical segment which hooks on to the main arch wire distal to the canine bracket (Figure 1).

**Figure 1:** Diagram of Churro Jumper Arch.



**Figure 2:** Arch Wire Modification.**Figure 3:** Post-Treatment.

- The auxillary arch was fabricated such that it was midway in the vestibular area. This care was taken to prevent the loss of appliance activation and soft tissue irritation if placed deeper in the vestibule. The jumper's maxillary circle is attached onto the maxillary headgear tube and the mandibular circle is attached on to the auxillary wire placed. This reduces the chance of canine bracket debonding as force is applied on the auxillary wire. Being placed lower down in the arch, the visibility of the appliance was reduced. Force was applied below the centre of resistance of the mandibular teeth, which in turn would reduce lower incisor proclination as a side effect.

#### CONCLUSION

With this minor alteration in the appliance, the Churro jumper could be used more efficiently. It eliminated the problems which were previously encountered (Figures 2 and 3). The appliance can well be used in conjunction with fully bonded arch and thus, saves the treatment time spent in aligning the bicuspid later.

#### CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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