Short communication

Twin Block: A Compliant Class- II Corrector

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Abstract

Twin block from its inception and evolution of the appliance itself has been widely accepted as a more competent Class-II corrector compared to earlier bulky monobloc appliances. This article gives a bird’s eye view of the most widely used functional appliance with its most common modifications along with the case reports.

Keywords: Twin Block, Class-II, Jackscrew, magnets

Introduction

The correction of skeletal Class-II in non compliant, growing patients has been a major hurdle in the success of functional appliance therapy. The introduction of twin block appliance to the orthodontic armamentarium in the year 1977 by Dr.William Clark, has been a significant improvement in treatment of non compliant Class II-patients.

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Mode of action of Twin Block

The Twin block works on the philosophy of occlusal inclined planes and use of masticatory force throughout the day. If the mandibular inclined planes are in a distal relation to that of maxilla then the force acting on the mandibular teeth will have a distal force vector leading to a Class II growth tendency. The aim of the inclined planes of the bite blocks in twin block is to modify these inclined planes and cause more favorable growth pattern. Hence the
unfavorable cuspal contacts of the distal occlusion are replaced by favorable proprioceptive contacts on the inclined planes to correct the malocclusion and free the mandible from its locked distal position.¹

Claimed Advantages Of Twin Block

Patients wear Twin Blocks 24 hours per day and can eat comfortably with the appliances in place. Twin Blocks can be designed with no visible anterior wires without losing its efficiency in correction of arch relationships. There is less interference with normal function because the mandible can move freely in anterior and lateral excursion without being restricted by a bulky one-piece appliance.

Twin Blocks may be fixed to the teeth temporarily or permanently to guarantee patient compliance. Removable Twin Blocks can be fixed in the mouth for the first week or 10 days of treatment to ensure that the patient adapts fully to wearing them 24 hours per day. Patients can learn to speak normally with Twin Blocks. In comparison with other functional appliances, Twin Blocks do not distort speech by restricting movement of the tongue, lips or mandible. Adjustment and activation is simple. The appliances are comfortable and not prone to breakage. Chair side time is reduced in achieving major correction¹

One of the added advantages of twin block is its versatility in being able to correct transverse discrepancy by incorporating midline jackscrew since a deficiency in the transverse plane is often encountered with a skeletal Class II.
Fixed Twin Block

In addition to effectively proving to be an alternative to the functional appliances of yester years, Twin block in its fixed form is emerging as an appliance of choice in comparison to other fixed functional appliances when minimal growth is left.\textsuperscript{2,3,4,5}

Here are the results of a case of a female patient who reported at the age of 14 years with a skeletal Class-II malocclusion. The patient was undertaking endodontic treatment for 11 that ruled out the possibility of orthodontic tooth movement for 6-12 weeks. The time required for alignment and levelling to be achieved as a prerequisite for fixed functional appliances which are given on a stiff rectangular archwire, was instead utilized for correction of skeletal Class-II by a fixed twin block.

The immediate improvement in facial profile plays an important role in acceptance of the appliance by teen patients belonging to the age group of 13-14 years.

Magnetic Twin Block

Twin block is usually instituted when last phases of growth are left and the effects of magnets in improved cellular response have been well documented in orthodontic literature\textsuperscript{6-10}. We have also used this
combination of twin block with magnets to maximise the efficiency in correction of Class-II malocclusion\(^1\)

**Conclusion**

The Twin Block appliance due to its acceptability, adaptability, versatility, efficiency, and ease of incremental mandibular advancement without changing the appliance has become one of the most widely used functional appliance in the correction of Class-II malocclusion.

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