

Terapija II klase modifikacijom rasta, sa posebnim osvrtom na primenu „M” blok aparata

Class II Therapy by Growth Modification, with Special Reference to the Application of the “M” Block Apparatus

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Apstrakt

Uvod: „M” blok je aparat sa šraфом po Sanderu spada u grupu mobilnih, zubno nošenih funkcionalnih aparata. Sastoji se od posebnih delova za gornju i donju vilicu.

Cilj rada: Promenom prostornog položaja donje vilice „M” blok aparat dovodi do aktivacije miotatičnih refleksa, koji kroz duži vremenski period dovode do remodelacije i promene u pravcu rasta kondila, artikularne jame i porasta cele donje vilice.

Metodologija: Za svoje delovanje aparat koristi modifikaciju rasta. Indikacije za primenu „M” bloka su malokluzije II skeletne klase po Angle-u, u periodu pubertetskog ubrzanja rasta sa mandibularnim retrognatizmom, blagim maksilarnim prognatizmom, rast lica prednjom rotacijom, anteinklinacijom donje vilice, povećanim incizalnim razmakom, protruzijom gornjih sekutića i retruzijom donjih sekutića.

Kontraindikacije za terapijsku primenu „M” bloka su malokluzije II skeletne klase za nepravilnostima u vertikalnom pravcu (hiperdivergentni rast vilica), malokluzije III skeletne klase i skeletno otvoren zagrižaj.

Idealno vreme za početak terapije „M” blokom je godinu dana pre pubertetskog ubrzanja rasta. Na snimku šake, to je SH2 stadijum, a po Bačetićevoj analizi vratnih pršljenova je stadijum CS3. Kao i kod svih aparata koji koriste modifikaciju rasta, najvažnije je dobro uzeti konstrukcioni zagrižaj. Za brzu orijentaciju i ovdje važi pravilo 10.

Konstrukcioni zagrižaj za „M” blok podrazumeva:

- u sagitalnom pravcu ivični odnos sekutića, između sekutića treba da bude 2 mm voska, što istovremeno određuje vertikalno otvaranje.
- u transferzalnom pravcu treba da poklopimo sredinu gornje i donje vilice, a ne sredinu zubnih nizova tj. prenosimo odnos vilica iz fiziološkog mirovanja.

Delovi aparata: Aparat se sastoji iz posebnih delova za gornju i donju vilicu.

U ploči gornjeg dela aparata, nalazi se zavrtanj po Sanderu. On u sebi sadrži 2 metalna kraka, dužine od 13 do 16 mm, koji su u odnosu na okluzalnu ravan postavljeni pod uglom od 60 stepeni. Dužina tih heliksa mora da bude od 13 do 16 mm, jer na taj način obezbeđuje delovanje aparata i onda kada je fiziološko mirovanje povećano, tj. u toku sna.

U donjoj ploči, u njenom središnjem delu, nalazi se inklinirana ravan u akrilatu.

Abstract

Introduction: “M” block is an appliance with a screw according to Sander and it belongs to the group of mobile, dentally worn functional appliances. It consists of special parts for the upper and lower jaw.

The aims: By changing the spatial position of the lower jaw, the “M” block device leads to the activation of myotatic reflexes, which over a long period of time lead to remodeling and changes in the direction of growth of the condyle, articular fossa and growth of the entire lower jaw.

Methodology: The device uses growth modification for its action. Indications for the application of the M block are malocclusions of the II skeletal voice according to Angle, in the period of pubertal growth acceleration with mandibular retrognathism, mild maxillary prognathism, facial growth by anterior rotation, ante inclination of the lower jaw, increased incisal distance, protrusion of the upper incisors and retrusion of the lower incisors.

Contraindications for the therapeutic application of the “M” block are malocclusions of skeletal class II due to irregularities in the vertical direction (hyperdivergent growth of the jaws), malocclusions of skeletal class III, and skeletal open bite.

The ideal time to start the “M” block therapy is one year before the puberty growth spurt. On the hand scan, it is the SH2 stage, and according to Bačeti’s analysis of the cervical vertebrae, it is the CS3 stage. As with all devices that use growth modification, the most important thing is to take a good construction bite. For quick orientation, rule 10 applies here as well.

The design specification for the “M” block includes:

- In the sagittal direction, the edge relationship of the incisors, there should be 2mm of wax between the incisors, which at the same time determines the vertical opening.
- In the transferal direction, we should overlap the middle of the upper and lower jaw and not the middle of the tooth rows, i.e. we transfer the relationship of the jaws from physiological rest.

Appliance parts: The appliance consists of special parts for the upper and lower jaw.

In the plate of the upper part of the device, there is a Sander screw. It contains 2 metal arms, 13 to 16 mm long, which are placed at an angle of 60 degrees in relation to the occlusal plane. The length of these helixes must be 13-16 mm, because in this way it ensures the operation of the apparatus even when the physiological rest is increased, i.e. during sleep.

In the lower plate, in its central part, there is an inclined plane in acrylic.



Faze u terapiji: Postoje 2 faze, klinička i laboratorijska.

Klinička faza podrazumeva: anamnezu, klinički pregled, funkcionalno ispitivanje, uzimanje otisaka za studijske modele, radiografisanje i fotografisanje pacijenata. Na osnovu radiograma i analiza studijskih modela, postavlja se dijagnoza i određuje plan terapije. U drugoj poseti, uzima se konstrukcioni zagrižaj i otisci za radne modele.

Laboratorijska faza podrazumeva izradu studijskih modela i izradu aparata.

Efekti primene „M” bloka:

- skeletni: stimulisanje rasta mandibule, obuzdavanje rasta maksile,
- dentalni: retruzija gornjih sekutića, protruzija donjih sekutića,
- mišićni: uspostavljanje balansa između facijalnih i mastikatornih mišića.

Zaključak: U vertikalnom pravcu, „M” blok podstiče zadnju rotaciju, te je preporuka primene u slučajevima kada pacijent raste prednjom rotacijom.

Aparat je veoma komforan za nošenje iz razloga što se sastoji iz posebnih delova za gornju i donju vilicu. Dečak ga rado nosi, što nije slučaj sa monoblokom. Pored toga što koristi modifikaciju rasta, može u svom sastavu imati šrafove i opruge, pa sve što postizemo aktivnim aparatima (retruziju, protruziju i rešavanje teskobe) možemo postići i „M” blokom uz rešavanje sagitale.

Phases in therapy: There are 2 phases, clinical and laboratory.

The clinical phase includes anamnesis, clinical examination, functional examination, taking impressions for study models, radiography, and photography of patients. On the basis of radiographs and analysis of study models, a diagnosis is made and a therapy plan is determined. On the second visit, a construction bite and impressions are taken for working models.

The laboratory phase involves the creation of study models and the creation of apparatus.

Effects of applying the “M” block:

- Skeletal: stimulating the growth of the mandible, restraining the growth of the maxilla
- Dental: retrusion of upper incisors, protrusion of lower incisors
- Muscular: establishing a balance between facial and masticatory muscles

Conclusion: In the vertical direction, the “M” block encourages posterior rotation, so it is recommended for use in cases where the patient grows with anterior rotation.

The device is very comfortable to wear because it consists of special parts for the upper and lower jaw. Children like to wear it, which is not the case with the monobloc. In addition to using growth modification, it can have screws and springs in its composition, so everything we achieve with active devices/retrusion, protrusion, and resolution of anxiety/we can also achieve the “M block” with the resolution of the sagittal.