

THE MINISTRY OF HEALTH OF UKRAINE
THE HIGHER STATE EDUCATIONAL INSTITUTION OF UKRAINE
"UKRAINIAN MEDICAL STOMATOLOGICAL ACADEMY"

Approved
at the meeting of orthodontics department
«_____»_____20____y.
protocol №____by _____
Head of department_____ L.V. Smaglyuk

METHODICAL RECOMMENDATION
for independent work of students during the preparation
to practical lessons and on the lessons

Academic discipline	Orthodontics
Module №1	Orthodontia. Diagnostic of dento-gnathic anomalies and deformations.
The theme of the lesson № 20	Biological treatment method. Myogymnastic. Massage.
Course	III
Faculty	Preparation of foreign students

Poltava 2016

1. The relevance of the topic. Early diagnosis of dento-alveolar anomalies and deformations and their timely treatment warn of malocclusion prevention. In connection with local and general irregularities in the deformation of the bite it is necessary to use complexes of therapeutic interventions according to age of patient. They should include treatment methods to address the reasons for the development of morphological, functional and aesthetic disturbances in dentition. It is to this refers to biological or physiological method of treatment.

2. Specific objectives:

To know the types of biological treatment;

To know the peculiarities of maxillofacial region development in different age periods;

To know the anatomical and physiological characteristics of facial and masticatory muscles;

To identify indications for physiological capacity using;

To determine the indications for massage using;

To know dosage of the capacity;

To assign set of myogymnastics.

3. Basic knowledge's, abilities, skills necessary for studying the topic (interdisciplinary integration)

Name of previous disciplines	Skills
1. Anatomy	Features of the facial bones structure. The structure of the TMJ in different age periods. Origin of maxillo-facial region, tongue, soft palate, pharynx and their function.
2. Normal physiology	Sequence of pulses in muscle contraction.
3. Neurology	Innervations of muscles.
4. Medical psychology	Principles of information learning in childhood. Provide guidance to parents on how to carry out myogymnastic.
5. Children's stomatology	Dental growth and development of the facial skeleton and muscles in the age aspect.

4. Tasks for independent work during preparation to the lesson and on the lesson

4.1.A list of the main terms, parameters, characteristics that need to learn by the student during the preparation to the lesson:

Terms	Definition
1. The biological method of treatment	Method of treatment based on the ability of the organism to self-regulation.
2. The myogymnastic	The method of physiotherapy, which is used in orthodontics for the prevention and treatment of malocclusion.

3. The massage	(from French – masser – grinding) – a set of mechanical and reflex methods effects on tissues and organs in the form of friction, pressure, vibration, carried out directly on the surface of the human body.
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4.2. Theoretical questions to the lesson:

1. The biological method of treatment.
2. The concept of "self-regulation".
3. Physiological capacity, its purpose.
4. Types of massage, purpose, methodology.
5. Physiotherapeutic methods of influence, purpose, techniques.
6. Anatomical and functional peculiarities of the masticatory and facial muscles.
7. Myogymnastic complexes of exercises for each kind of anomalies.
8. Devices for myogymnastic.
9. Types of physiotherapeutic influences and their purpose.

4.3. Practical works (task) which are executed at the lesson:

1. To make a complex of myogymnastic exercises with using different biological methods according to the age of patient.
2. To master the technique of massage (finger, vibration).
3. To determine needed stages of physiological capacity.
4. To make a complex of myogymnastic exercises with using different appliances.

The content of the topic:

Early diagnostics of malocclusions and their timely treatment prevent violations of bite and aesthetics of a face. In this connection it is necessary to apply the complex of the medical measures for patients of different age. They must include methods of treatment aimed at removal of the development reasons of morphological, functional and aesthetic violations as well as removal of violations. After defining of diagnosis we determine age-dependent indication or contra-indications to orthodontic treatment. At the same time have to decide, whether at the present time the patient has malocclusion or it is the state of compensation. And also we determine the prospects of further development of malocclusion with age and whether self-regulation of violation is possible, in what volume and how much time it will take. These data define indications or contraindications to the orthodontic treatment and its volume. When determining of age-dependent indications to treatment we should pay attention to the age as the index of maturity and its potential possibilities for further growth and forming of the dental system.

One of the methods based on the possibility of self-regulation present or possible violations is called *biological*. Its use is based on natural physiological forces of the body. Therefore this method is also called *physiological* method.

Biological method can be the separate (independent method) at the beginning of orthodontic treatment at the age of 4-6 years (period of temporal teeth) with the purpose of prophylaxis and treatment of deformations, which are

being formed. In the period of mixed dentition (6-12 years) biological treatment is used with the purpose of reasons of deformation development removal up to moment of active orthodontic treatment or during the period of treatment. In some cases this method is appointed after the period of active orthodontic treatment, with the purpose of relapses development prevention, if the appliances of mechanical action were used. In the period of permanent teeth this method is appointed with the purpose of orthodontic treatment acceleration (vibration and ultrasonic massage), and also for training of muscles with the purpose of renewal of the lost functions.

The biological method of treatment includes the physiological capacity, massage, gymnastics of mimic muscles, electrostimulation, activation of bioactive points (acupuncture, laser therapy) and other.

The valuable of physiological capacity is recommended for normal development of masticatory apparatus (jaws and muscles). It is appointed to the children suffering from «laziness of mastication». Such children usually sit at the table for long times, prefer soft food. The signs of temporal bite senescence are quite often absent (abrasion of masticatory surfaces and cutting edges of temporal teeth, appearance of physiological dieresis). Insufficiency of the functional loading results in the underdevelopment of dental arcs that result of teeth in the dental arcs wrong location. For normalization of mastication function and correct functioning of masticatory musculature and also development of jaws we recommend raw green vegetables and fruit, crusts of bread, introduction in the diet of a child hard food that requires mechanical force and certain efforts.

One of the biological methods of treatment types is *a massage*. Massage is a mechanical irritation of tissues, used with therapeutic purpose. Massage mechanically irritates surface and deep tissues, peripheral nerve receptors, which provokes different reflex phenomena leading to the change of organs and tissues functions. The degree of influence on the nervous system depends on massage maneuvers, intensity, and the time of carrying out the procedure. For example, rubbing and effleurage reduce excitability, which causes analgesia, and hatchment, manual percussion and vibration, vice versa, increase it. As a result of mechanical irritation vessels of skin and deep tissues dilate, which causes the increase of the lymph and blood flow, metabolism, biochemical processes and protective functions of tissues intensity. In the skin due to the acceleration of albuminolysis and enzymatic activity biologically active substances appear (histamine, acetylcholine), exerting humoral influence on the vessels tone. Fatigue disappears in muscles due to the accelerated excretion of energy splitting products. Swelling reduces and metabolism is stimulated in tissues, which increases their contractile function and efficiency. Blood is redistributed in the massaged tissue, which influences cardiovascular system functions. Massage stimulates regenerative processes in tissues through microcirculation improvement, increases tissues mobility.

Hand massage is recommended in default of physiological diereses in the period of temporal bite, when there is pathology of soft tissues attachment (shallow threshold), at the anomalies of separate teeth position (small turn on the axis, oral

inclination it there is of insignificant place deficit) and etc. Dactylic massage is better to conduct in the morning and in the evening after brushing of teeth and rinse of the mouth. We execute it by the thumb if indicator finger of the left and right arm alternately. Fingers are mowed move in the vertical direction by sliding motions, whereupon we accomplish circular motions and horizontal moving along the alveolar process. We regulate the force of pressure individually, but it is recommended to multiply it gradually. For the improvement of sliding fingers can be smeared by glycerin or olive oil. Time of influence – 3-5 minutes on every jaw daily during hygienic procedures in the mouth cavity. After the massage the patient should rinse the mouth with warm water.

Vacuuming therapy is based on the use of low pressure with medical purpose. The method of dosed vacuum influence onto the mucous tunic and bony tissue was worked out under the direction of V.I. Kulazhenko (1960). Vacuum therapy is the usage of low pressure with therapeutic purpose. In the focus of action local pressure lowering is created and affected tissues retraction takes place, vessels permeability increases, which at sufficiently low vacuum leads to tissues disruption and hematoma formation. Tissues and vessels affection leads to the activation of physiological processes, directed at the elimination of the formed focus. In the focus the enzymatic degradation of the necrotizing albuminous molecules takes place, as a result – formation of biologically active substances (histamine, acetylcholine). Immunobiological processes, metabolism, and phagocytosis are activated. In consequence of local hypoxia development cellular protective and adaptive processes are activated, spare capillaries are opened, new microvessels develop. In the mechanism of action of importance is also of nerve receptors irritation both by vacuum and by albuminolysis products, which stimulates repair process in the focus of affection by reflex. Humoral influence of biologically active substances, getting into the bloodstream and influencing different processes in the organism, also should not be excluded. Destroyed tissue structures and microvessels soon recommence, which favorably marks on their functional ability. In orthodontics vacuum underpressure is used, equal to 40 mm Hg, which is created in the region of the transferred teeth roots. The course of treatment consists of 8-10 procedures, conducted when hematomas are resolved. At that, the proteoclastic enzymes, which have released from the tissue structures in the hematoma zone, accelerate reparative processes, which promotes shortening of treatment duration. According to T.I. Kovalenko (1985), after vacuum stimulation orthodontic teeth transfer in adults accelerates by 1.3-1.5 times for sure.

Blasted tissue structures and microvessels renew quickly, that is favorable for their functional capabilities. In orthodontics the method of vacuuming stimulation consists in creation of hearths of damage in tissues of paradontium in the area of the moved teeth roots and in the area of the palatal suture when narrowing of jaws treating. As a result of vacuuming influence in the tissues of paradontium fermentative processes are activating. Their high level there are is supported for 3-4 days. In addition, in a couple of days there is observed mitotical

activity which proceeds to 4 days. When we apply appliance treatment patients with the anomalies of separate teeth position and spacing should be recommended vacuuming therapy 2-4 courses of vacuuming therapy for 5 procedures each with an interval of 4-5 days with the purpose of reduction of orthodontic treatment terms. With flattening and protrusion of the maxilla frontal area we recommend 3-4 courses, with narrowing of the maxilla – 4-5 courses. In addition, application of vacuuming massage has favorable influence on the appliance influence: patients don't have inflammatory processes of gum mucous in the area of the moved teeth.

Vibration therapy is application of vibration with medical purpose. Action of vibration with medical purpose consists in strengthening of circulation of blood, exchange processes and stimulation of neurotropic functions. Vibration is used mainly as a vibration massage and is carried out by fingers or hands, special or by appliance. In orthodontic a vibration massage is used with the purpose of reduction of orthodontic treatment terms of jaws expansion, moving of the anomaly located teeth.

The anomalies of the bite at children are interconnected with the functional declining in activity of muscles, those circumferential rows. The normalization of maxillofacial area muscles function allows to reduce the term of treatment and to gain steady results. The increase of muscles system takes place as a result of frequent reductions of muscles that in its turn result in the increase of their mass because of the thickening of their tissues. Tension of muscles can be caused by the use of *electric irritants*. Their fatigue comes later, than the process of braking in nerve-centers. At an electro-stimulation the increase of muscle mass comes quicker than alter ordinary training.

The electrostimulation method is applied in stomatology at treating muscles atrophy in the craniofacial area, including cases arising as a result of long-term immobilization of jaws after their fracture, osteoplastic surgeries, myopathic paresises and paralyses. N.A. Plotnikova applied the electrostimulation method in orthodontics clinical practice in combination with orthodontic appliances for the treatment of prognathic occlusion. For the stimulation of retained teeth eruption the application of hyaluronidase action preparations is limited because evident allergic reactions are possible. This was a premise to study in experiments and clinical picture the influence of current stimulations and introduction of some vegetotropic preparations on teeth eruption. V.V. Halenko (1986) proved that teeth eruption speed may be regulated by the introduction of vegetotropic preparations. By means of exciting the vegetative nervous system, the preparations accelerate teeth eruption, by means of inhibiting – slow down the process. Stimulation with a cathode of liminal current with the power of 3 microamp accelerates teeth eruption by 36.7 %, and the stimulation with anode slows this process down by 36.7 %. Cathode and anode of supraliminal current inhibit eruption by 22.4 and 53.1 % respectively. Clinical use of the ways of retained teeth eruption acceleration with the usage of electrostimulation and electrophoresis with adrenaline enhance the efficiency of treating the given pathology in comparison with instrument method by 2 times on average and shortens treatment duration by more than 3 times. The

method of accelerating retained teeth eruption by galvanic current consists in passing continuous current through the tissues of the alveolar process, in which retained teeth are located. Current density makes 0.1-0.2 microamp/cm², action duration 15-20 min; procedures are conducted daily during 15-20 days. V.V. Halenko recommends using pulse single-cycle undulatory current of 50 Hz frequency. The sendings period makes 8 + 1.4 s. The time of action 10-15 min, sessions daily during 15-20 days. Electrophoresis with adrenaline is carried out, watering the padding under the active electrode with 0.1 % adrenaline solution; in another case electrophoresis technique does not differ from galvanization technique. Electrostimulation of tissues in the area of the retained tooth with galvanic or pulse current should be conducted at treating patients with teeth retention of the 1st-2nd degree, conditioned by the presence of supplemental teeth. At unfinished formation of the roots of complete and supplemental teeth the surgical removal of the latter is not advisable. Acceleration of retained teeth eruption with the help of electrophoresis with adrenaline is recommended at treating patients older than 12 years with teeth retention of the 1st-3rd degree, and also in case of unconditional application of electrostimulation. The mentioned techniques of treatment intensification are not complex, accessible for application in a stomatology polyclinic if there is a physiotherapeutic room. Children endure the treatment easily, no complications are observed. Therapeutic efficacy of these techniques and treatment terms reduction allow recommending electrostimulation and electrophoresis with adrenaline in the region of retained teeth for treatment at their eruption delay.

An important role for the proper formation of the bite plays a balanced muscle work of maxillofacial area. With the help of special exercises reach restore muscle function and prevent the development of malocclusion. The treatment principle is to train the muscles that helps to normalize the function of muscles-synergists and antagonists. Physiotherapy can be an independent method of treatment may be preceded by orthodontic treatment, with it or be applied after graduation to consolidate the gains made and prevent relapse. Exercises you can to achieve positive results in the treatment of anomalies in children in the period of temporary occlusion that has formed. For such treatment is the most suitable age from 4 to 7 years when the child can understand what we require, and to perform the exercises. The effect of treatment depends on the severity of morphological and functional disorders, and the patience of the patient, his perseverance and control over the thoroughness of the exercise. Exercises should be chosen based on the age of the child. They should not be too heavy, understandable; it is desirable to turn them into an exciting game. As independent method of treatment *myogymnastics* can give a good result in the case of upper incisors protrusion and neutral correlation of lateral teeth. Exercises are appointed without appliances or with special appliances.

To *the labial appliances* we the shock absorber of Rogers and Shans, disk-plate by Friel, stabilizator by Noah, Dass activator. Intra-buccal appliances are vestibular plate of Kraus, Hots and Shonher others. There are special exercises for

the orbicularis oris muscle, muscles pulling out and lifting the lower jaw, muscles of the tongue, and also muscles of shoulder belt.

For development of the orbicularis oris muscle, it is recommended to whistle, blow at suspended piece of cotton wool, feather. We also recommend also lying between lips a piece of paper folded in two. A patient retains a paper for 30-50 minutes at the time of doing homework or when watching TV.

Most often we use exercises for training of resistance such as: a child puts bent little fingers in the mouth corners and stretches them slightly, at the same time he closes lips against retention.

Exercises with the disc by Friel. The disc is put between the lips and held by lips during the exercise for 1 min. and for 2-3 minutes.

Exercises with the activator by Dass. Activator is made from an orthodontic wire with a diameter 1-1,2 mm and acrylics. A segment of wire to 25 cm long is bent in the middle in the shape of a ring or end, athwart to the plane of ring, or ends – in, the shape of a triangle that are athwart to the plane of the ring. We model the plates in the shape of lips. A child holds the activator by lips 2 times a day for 2x20 times.

The action of Rogers appliance is based on the same principle. It has the shape of a mouth widener on which we put a rubber ring. The force of reduction of the orbicularis oris muscle must welcome the force of the rubber ring reduction.

Exercises with a plate from acrylics. A child holds by lips the edge of plate (102 mm long) and retains it in the horizontal position. On the plate we put on some burden. The increase of burden causes strengthening of lips compression.

Exercises with the buttons. Two buttons with the diameter 25-30 mm are connected by a lace and are disposed in the distance of 15-18 cm from each other. A child takes one button by lips, while he takes the other button with the right hand and pulls the cord. This exercise is done 2-3 times a day, repeating it for 10 times.

Exercise with a vestibular plate. With the purpose of orthodontic treatment children inlay a vestibular plate in the mouth at the time of sleep. In the day-time children use the plate only for the time of gymnastics. The purpose of exercises is training of the orbicularis oris muscle, normalization of breathing, correction of tongue position, lower jaw, neck department of spine and head. A vestibular plate is inlaid in the vestibule, by the thumb of the right hand and it is pulled forward by a ring and it retained by the closed lips. Exercise is done 2 times a 5-15 times daily.

Exercises for muscles that move the lower jaw forward. These exercises are recommended for treatment of the distal bite. Patients perform them sitting or standing. A patient slowly pulls forward the lower jaw until the incisors cutting edges connecting. In such position the lower jaw is held for 10 sec. and then slowly it is set in the initial position. The same exercise is done with the turn of the head, first to the right, and then to the left. After mastering of the exercise a patient retains the lower jaw in the pulled out position as long as possible and repeats the exercise 10 times. capacity is multiplied when a patient does the exercise standing; he/she slightly throws back the head, puts feet on the width of the shoulders, hands

are behind, and a patient slowly pulls out the lower jaw forward until the lower incisors will cover the upper incisors.

Exercises for muscles that lift the lower jaw. One of them is compression of teeth in the central occlusion. A child squeezes and unclenches teeth. The force of reduction of muscles is controlled by the fingers that are put on the cheeks in area of masseters at the front edge of lower jaw branch. That exercise can be executed with resistance. For this purpose a child puts the index and middle fingers of the right hand on the lower teeth and, lifting the lower jaw renders counteraction by pressure of the fingers.

Exercise «Biting of a stick». On a wooden stick we put a rubber tube, then lay it between lateral teeth of a patient and retain it in such position. A patient squeezes and unclenches teeth, gradually moving a stick on the dental arc.

Exercises for correction of teeth position anomalies. For correction of the palatal inclination of the upper teeth a few exercises are recommended in the period of their teething:

1. Pressure on the teeth by the tongue during 3-5 min., then a pause.
2. Biting of the lower lip by the upper teeth during 2-3 min. It is necessary to recommend this exercise with a caution, so that a patient doesn't form this harmful habit in the future.

3. Complexes of physical exercises for the varieties of the mesial bite. Patients do them 2 times per a day for 8-10 min. We begin with walking at one place during 2 minutes. Then exercises follow, that normalize the nasal breathing and position of teeth, including overbiting of the lower lip by the upper teeth and exercises with a spatula, which is executed during 1-4 min.

Exercises for the normalization of the tongue function. The physical exercises for the tongue are recommended after the frenulotomy, and also after normalizing of harmful habits such as suction of fingers and different objects, normalization of the correct swallowing and pronunciation of sounds. With a half open mouth the child licks upper and lower lips, move the tongue from one corner of the mouth to another, and the tries to touch by the nose the tongue, or the chin.

Materials for self-control:

A. Tasks for self-control (tables, diagrams, drawings, graphs):

1. Write down the determination of biological method of treatment;
2. Write in the abstract for determining the concept of "self-regulation".
3. Write in the notes indications for various types of massage.
4. Write in the notes complexes myogymnastic for different muscle groups.
5. To drown in the album the devices for myogymnastic exercises.

B. Tasks for self-control:

1. The main method of treatment for nasal breathing training is:
breathing exercises
massage of perioral region
balneotherapy

hardware treatment
electrical stimulation

2. The indications for the vestibular plate for myotherapy use in children with temporary occlusion are:

vestibular inclination of the teeth
violations the lips closing
the narrowing of the dentition
unconnecting of anterior teeth
oral inclination of the teeth

3. Gymnastic exercises for the muscles of the maxillofacial region as a method of orthodontic prophylaxis and treatment have been proposed:

Rogers
Khoroshilkina
Angle
Schwartz
Pereverzev

4. Disks by Friel used for training of:

orbicularis oris muscles
pharyngeal muscles
muscles of the tongue
muscle that elevate the lower jaw
muscles, pushing the lower jaw forward

5. Activator by Dass used for training of:

orbicularis oris muscles
pharyngeal muscles
muscles of the tongue
muscle that elevate the lower jaw
muscles, pushing the lower jaw forward

6. For the correction of dento-facial anomalies in children of preschool age most often used:

biological method
instrumental method
combined method of treatment
prosthetic method
surgical technique

7. Vibratory massage is indicated for:

accelerate orthodontic treatment
normalization of swallowing function

eliminate of bad habits
normalization of respiratory function
retention of treatment results

8. To train what muscle equilibrators are used?

orbicularis oris muscles
pharyngeal muscles
muscles of the tongue
muscle that elevate the lower jaw
muscles, pushing the lower jaw forward

9. The windmill is intended for the development and training:

orbicularis oris muscles
pharyngeal muscles
muscles of the tongue
muscle that elevate the lower jaw
muscles, pushing the lower jaw forward

10. The table-machine is used with the aim of development and training of:

orbicularis oris muscles and respiratory muscles
pharyngeal muscles
muscles of the tongue
muscle that elevate the lower jaw
muscles, pushing the lower jaw forward

11. Exercise "sticks biting" trains the muscles:

muscle that elevate the lower jaw
retractors
pharyngeal muscles
muscles of the tongue
muscles, pushing the lower jaw forward

12. The purpose of the myogymnastics lesson introductory stage is:

training of body to increasing loads
performing special exercises aimed at normalizing the functions of
separate organs and systems
gradual relaxation of the body, reduced stress, normalization of respiratory
function
using of maximum muscle tension
normalization of the swallowing and respiration functions

13. Purpose of the primary corrective gymnastics lessons is:

performing of special exercises aimed at normalizing of the functions
training the body to increasing loads

the gradual relaxation of the body, normalization of respiratory function
gradual reduction of loading of separate organs and systems
the gradual relaxation of the body, normalization of chewing function

14. Purpose of the final corrective gymnastics lessons is:
gradual relaxation of the body, reduce the load, normalization of respiratory function
training the body to increasing loads
performing of special exercises aimed at normalizing the functions of separate organs and systems
using of maximum muscle tension
normalization of the swallowing and respiration functions

15. When indicated the hand massage?
a small turn around a tooth axis
with narrowing of dental arches
with the aim of nasal breathing restoring
for the normalization of swallowing function
to normalize the function of speech

16. Manual massage is not indicated for:
pathology of temporomandibular joint
pathology of attachment of soft tissues
small turn of a tooth around the axis
oral inclination of the tooth, subject to the availability of space in the dental arch
in the absence of diastema and trema during the period of temporary occlusion

17. Vacuum therapy is used:
in the treatment of dental arches narrowing
to stimulate the muscle tone
to normalize the position of the tongue in the oral cavity
to restore the swallowing function
to normalize the lips tonus

18. When flattening of the frontal section of the upper jaw, the numbers of vacuum therapy courses are:

3-4
5-7
1-2
7-8
10

19. When narrowing of the upper jaw, the numbers of vacuum therapy courses are:

4-5

3-4

2-3

5-6

9

20. Exercises with the cotton rolls used to normalize the function:

the lips closing

breathing

swallowing

chewing

speech

21. To labialis the apparatus does not include:

appliance by Shonher

stabilizer by Noah

activator by Dass

appliance by Rogers

disk by Friel

22. For the development of the orbicularis oris muscles do not use the exercise:

with cotton rolls

with a strip of paper

with a feather

with a buttons

whistling

23. Exercise with the metal disk does not contribute to:

the normalization of speech function

moving of the mandible forward

the muscles perioral region

training neck and chest muscles

nose breathing

24. The exercise of "closing of teeth in central occlusion" promotes training of muscles:

the muscles that elevate the lower jaw

the muscles that lower the mandible

the muscles that push the lower jaw

muscle retractors

the muscles that displace the lower jaw to the side

25. To intra-buccal apparatus does not apply:

activator by Dass

vestibular plate by Hotz

vestibular plate by Shonher

vestibular plate by Kraus

vestibular plate by Schwartz

26. Biological method does not include:

electroodontodiagnostics

various types of massage

myogymnastics

electrical stimulation

physiological stress

27. Physiological load is recommended for:

normal development of the masticatory apparatus

eliminate of sucking bad habits

normalization of swallowing function

accelerate of orthodontic treatment

normalization of speech function

28. In orthodontic practice do not use type of massage:

relaxing

vacuum

ultrasonic

vibrating

manual

29. Electrical stimulation in orthodontics used for:

acceleration of impacted teeth eruption

eliminate of bad habits

retention of the results achieved with orthodontic treatment

normalization of swallowing function

the normalization of speech function

30. What indication for hydromassage?

for the normalization of swallowing function

to normalize the function of speech

for normalization of respiratory function

the normalization of the movement of the tongue in the palatine

to normalize the function of mastication

31. When the distal occlusion is necessary to train the muscles:

the muscles that displace the lower jaw forward and orbicularis oris
the muscles that lift the lower jaw
the muscles that lower the mandible
the muscles that displace the lower jaw to the side
the muscles involved in the act of swallowing

32. Electromyostimulation is used for:
normalize the function of muscles of the maxillofacial region
eliminate of bad habits
for the correction of the soft tissue topography
to expand the dental arches
for the expansion of the basal arch

33. Myoelectrostimulation is indicated for:
the treatment of deep bite
the treatment of TMJ
during the expansion of the dental arches
eliminate of bad habits
the treatment of open bite

34. To correct the palatal inclination of the upper frontal teeth used exercise:
biting of the lower lip by the upper incisors
with a plastic of plate
with cotton rolls
with appliance by Rogers
with activator by Dass

35. In the treatment of distal occlusion is used training:
with cotton rolls
with a plastic of plate
with appliance by Rogers
with activator by Dass
biting of the lower lip by the upper incisors

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