

**Quantum Medicine Association  
Institute of Quantum Medicine  
JSC "MILTA-PKP GIT"**

# **QUANTUM THERAPY IN STOMATOLOGY**

Methodical recommendations  
for application of RIKTA<sup>®</sup> family devices

**Moscow 2006**

**Quantum therapy in stomatology / Methodical guide for application of RIKTA ® family devices - M.: Quantum Medicine Asociacion, 2005.- Eng. - 34p.**

This second edition of the methodical manual is intended for specialists in dentistry, namely, stomatologists specialized in quantum therapy. It will be useful also for all users of the devices RIKTA®.

Methods of quantum therapy for the treatment and prevention of various stomatological diseases are described, as well as indications and contraindications for quantum therapy use.

ISBN 5-9700-0022-1

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"Medicine of tomorrow helps

to be healthy today!"

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## FOREWORD

Dear Colleagues!

Institute of Quantum Medicine and JSC "MILTA-PKP GIT" propose to your attention the second edition of methodical recommendations for application of the quantum therapy device RIKTA® in practical stomatology.

This guide on application of various methods of quantum therapy in stomatology has been elaborated by stomatologists M.R.Genkin and V.V.Luchenkova on the basis of their more than ten-year experience of use of the device RIKTA®. The present edition has been revised and edited by DrM L.I.Gousev, Yu.G.Fedorov and stomatologist O.S.Efremov.

Quantum medicine is a newly originated and quickly developing branch of modern medicine. Quantum medicine arose from achievements of quantum physics, millenary experience of oriental medicine and modern high technologies. It is based on acknowledgement of quantum, that is, electromagnetic, nature of the living. This idea was enounced in 1943 by E. Schroedinger, one of the most eminent physicists of the modern era. Quantum medicine is based on interaction of processes of the living with electromagnetic emission. In case of purposeful external impact of certain kinds of electromagnetic fields on a living body we can speak about quantum therapy, prophylaxis and rehabilitation. Analyzing and measuring internal electromagnetic emissions created by a living organism we can speak about quantum diagnostics. Therefore, quantum medicine embraces all stages of assuring human health: prophylaxis, diagnosis, treatment and rehabilitation.

Quantum is an infinitesimal, elementary portion of electromagnetic emission. Quantum therapy deals with very low energy levels typical for information exchange processes. Many effects produced by quantum therapy can be explained by information, rather than energy-related, positive impact on intracellular processes and intercellular interactions.

In the process of its evolution, the human race has continuously been submerged in the natural system of electromagnetic fields and has been always a part of it. Life is impossible without the impact of the Earth's natural electromagnetic fields, to which all living creatures have become adjusted in the course of their evolution. There are electro-

magnetic fluctuations everywhere both in the external environment and inside a living organism. Naturalists, physicists, biologists and physicians now take the view that electromagnetic radiation plays a paramount role in living processes. The reason why scientific thought had difficulty realizing this earlier is that the human being cannot feel electromagnetic influences directly. In addition, electromagnetic impact levels both inside and between living systems are so small that they cannot always be measured with sufficient accuracy instrumentally. Still, many phenomena occurring in living nature defy any other explanation than electromagnetic impact both at the micro level (atoms, molecules, and cells), and at the macro level (organs, systems, whole organisms, and communities of organisms). Electromagnetic fields are present in any chemical and physical process. Even when we take a prescribed medication, we experience the effects of electromagnetic radiation. Under the impact of ferments, the drug is subjected to biochemical reactions, which provoke transfers of electric charges - electrons, and changes in the energy states of atoms and molecules. These biochemical transformations invariably produce some kind of electromagnetic radiation or other.

It is now obvious that living cells interact with one another, exchanging energy and, what is extremely important, trading information with the help of fluctuations in the infrared, microwave, acoustic, and other bands. What is particularly interesting is that a major role in intercellular interaction is played by optic coherent, monochromatic and polarized radiation, which is close in its parameters to the infrared laser radiation used in the RIKTA® technologies. RIKTA® - is a device generating narrow-band infrared laser emission, infrared and visible red broad-band diode emission and constant magnetic field.

It is proved that quantum therapy is able to restore damages and disturbances of cell membranes, thus restoring broken information and energetic connections between cells, organs and systems. Quantum therapy assures stability of genetic information thanks to its beneficent influence on molecules DNA and RNA, thereby impeding the processes which are not proper to the living organism genetically.

Here are the key effects that quantum therapy may arouse in an organism:

- at the level of cells: heightened energy exchanges in cells and tissues, intensified synthesis of protein - RNA and DNA, reduced excitability of receptors in cell membranes, improved indol and serotonin exchanges in cerebral cells, normalized neurotransmitter levels,

and calcium-blocking effect;

- at the level of organs: increased speed of blood flow, rheological and microcirculatory effects, regulation of adenohipophysis, normalized thyroidal functioning, stimulation of the genital glands, and coronocactive, antispasmodic and metabolizing effects; and,

- at the level of the system and organism as a whole: stimulation of specific and non-specific immunity, improved blood circulation, anesthetization, reduced excitability of vegetative centers, improved conduction of nerve fibers, reduced glucocorticoid activity of the adrenal glands, reduced peroxidate oxidation of lipids, regulation of feedback, enhanced neurohumoral factors, increased production of ferments and ATF, reduced cholesterol levels, increased synthesis of collagen, improved trophic supply to tissues, increase regeneration of the epithelium and skin, prevention and treatment of cellulitis, normalization and increased synthesis of prostoglandines, and anti-inflammatory, anti-hypostatic, resorbent, sanogene, adaptive, stress limiting, hypolipidemic, and anti-oxidant effects.

Since 1991 the JSC "MILTA-PKP GIT" has been manufacturing in series quantum medical devices. They found a wide application in thousands of medical institutions in Russia and in 37 foreign countries such as Austria, Great Britain, Germany, Greece, Egipte, Israel, Canada, China, Portugal, USA, France, Suede and others. High effectiveness of quantum therapy is confirmed by a rich experience of clinical application of the devices RIKTA® in many leading clinics of these countries.

When quantum therapy is applied for treatment of a disease, it supposes a considerable cutting down in dose of medications.

There is a direct purposeful impact on the pathologic region and the organism systems functionally related to this region.

Quantum therapy always implies a non-invasive influence, without skin damage; a distant action, without touching the body, is also possible.

In the JSC "MILTA-PKP GIT" there is a permanent medical consulting center available for all customers. Training courses for doctors wishing to improve their skills in quantum therapy are organized on a regular basis. The graduates get Certificates stating the right to work with laser therapeutic devices in the profession of Quantum Medicine.

Annual national and international Scientific-Practical Conferences on Quantum Medicine are organized by Quantum Medicine Association and JSC "MILTA-PKP GIT. Leading specialists of big hospitals and research institutions of Russia and different foreign countries take part in these meetings.

JSC "MILTA-PKP GIT" manufactures a wide range of medical

devices for quantum therapy; a large number of methodical manuals and guides on quantum therapy of various diseases is available.

**We wish you good health!**

*President of Quantum Medicine Association,  
A.Ya. Grabovshchiner*

## INTRODUCTION

Yet Ebers papyrus (Ancien Egypt, from about 1500 BC) mentions diseases of teeth and gums. Egyptians treated dental diseases by incantations, sometimes they put in the aching tooth a sort of paste with black henbane. In China yet 3-4 thousand years ago some dental instruments like split wooden sticks, metal toothpick and tongue-cleaning scraper were recommended for teeth hygiene.

Hindu in their sacred books Vedas spoke about various diseases of the oral cavity (about 65 diseases). They attached a high importance to hygiene of mouth cavity using for this purpose different herbal and aromatic pastes. Among some casts those cultural habits have been conserved until now, - look at the white smile of the Hindu. However, there is not much merit of the modern renovating stomatology in it, because its expensive services are a "tough nut to crack" for the majority of population.

In Western Europe treatment of teeth started in XI-XIII centuries. Since 1810 a teeth-healer's diploma had become necessary for practicing teeth treatment. In Russia in 1935 eleven faculties of stomatology have been established in different medical schools. In 1962 the Central Research and development institute for stomatology opened in Russia.

This short excursion in the history of oral cavity hygiene, the uprise and development of stomatological assistance is not accidental. Its purpose is a formation of responsibility for the teeth, conservation of every one of them, and thus of health in general. The state of oral cavity is closely connected to the health condition of the whole body. Let smile with all 32 teeth, or at least with 28!

Among medical disciplines, stomatology is one of the pioneers in application of quantum irradiation in clinical practice. First publication on this topic appeared in the beginning of the 70-ies.

Generally speaking, effects of multi factor quantum therapy action could be summarized as anti-inflammatory. This results from normalization of microcirculation and decrease of vessel permeability. It leads to diminuation of oedema, increase of oxygen level in tissues, activation of metabolic and reparative processes. Analgetic and desensitizing effects are manifested, too. Immunity is activated and corrected, florula agressivity decreases, cell resistivity to pathogenic influence increases, and so on.

The device RIKTA® created by scientists and engineers of the JSC "MILTA-PKP GIT" is intended for treatment of a wide range of diseases by methods of quantum therapy.



It provides a sinergetic action of pulsed infrared laser emission, emission of infrared and red light diodes together with a specifically-shaped constant magnetic field. The device generates laser emission with repetition frequencies 5, 50, 1000 and optionally 3000(5000) Hz, with impulse power 12 W and wavelength 0.89 mcm. Exposure time can be set to 1, 2, 5 min and optionally, to 10 min. A set of light-guide nozzles KON-3 is intended to facilitate the application of the device in stomatology. This set includes: nozzle #1 - for local treatment of aphthae, #2 - for paradont and mucous membrane of the oral cavity, #3 - for external action on the face.

RIKTA® device has been used in practical stomatology since 1992. The devices have proven their high effectiveness and shortening of treatment of various stomatological diseases.

The present methodical recommendations contain the results of the author's clinical experience of more than 10 years.

## NOZZLES FOR STOMATOLOGY



- #1 - for the local treatment of aphthae, treatment in the region of one tooth and surrounding parodont;
- #2 - for the treatment of the parodont and of the mucous membrane of the oral cavity;
- #3 - for the external use on the projection of a pathology.

## QUANTUM THERAPY

Nowadays Quantum Therapy (QT) occupies a leading place by its effectiveness, the absence of habituation and complications. There are various methods of quantum therapy application: contact, distant, intracavitary methods and blood irradiation. The last one is considered to be one of the most efficient methods, due to its multiple beneficial therapeutic effects.

## **MECHANISM OF ACTION AND CLINICAL EFFECTS OF QUANTUM THERAPY**

As we have mentioned before, the modern quantum therapy provides a polyfactor action. Let us consider the effectiveness of every factor.

1. Pulsing red light. It does not penetrate deeply, nevertheless, it has a salubrious impact decreasing inflammation intensity especially in the zones of cellular tissue. This factor provides the following clinical effects: local analgesia, improvement of microcirculation in the treatment area, anti-edematose effect.

2. Pulsed infrared laser emission penetrates deeply, up to 13...15 cm, into tissues and renders a powerful activating action on blood circulation and membrane cellular metabolism. It provides the following clinical effects: activation of protein synthesis (RNA, DNA), increase of enzyme activity, increase of ATP generation, improvement of microcirculation, acceleration of tissue regeneration, intensification of collagen synthesis, resolvent, anthalgic and anti-edematose action, and some other effects.

3. Pulsed infrared emission has a wider spectrum and penetrates in tissue less deeply than laser emission; it provides such clinical effects as heating of superficial layers of tissular structures, activation of microcirculation, intensification of epithelium and skin regeneration.

4. Permanent magnetic field. Its action helps forward a dilatation of microcirculatory channels. This vasodilatory effect is conserved after a single impact during 1...6 days. After the whole course of treatment it lasts 30...45 days. Influencing a focus of inflammation brings antalgic, anti-inflammatory and regenerative effects. This factor enhances the penetration of laser emission in tissues.

**It should be taken into account that when irradiating directly a focus of pathology it is possible to observe the syndrom of “secondary exacerbation”** resulting from such factors as increasing antioxidant deficiency in blood (*a*-tocoferol), rising concentration of products of lipid peroxidation and deepening of membrane lipid and phospholipid spectrum shift, it is recommended, from the first day of QT, to take vitamins A, E, C for prevention or stopping this phenomena.

## QUANTUM HEMOTHERAPY

Methods of quantum hemotherapy were created in 1980 by the academician Meshalkin. As medical lasers then were low intensive, to achieve a therapeutic effect hemotherapy had been applied intravenously. The development of advanced quantum technologies and the creation of more performant quantum therapy devices made it possible to modify this method of hemotherapy by placing the emitter over large vessels. This method is called “transcutaneous laser hemotherapy”. With entering to the scene of a new generation of polyfactor devices of quantum therapy, the last notion became outdated and was replaced by “quantum hemotherapy”.

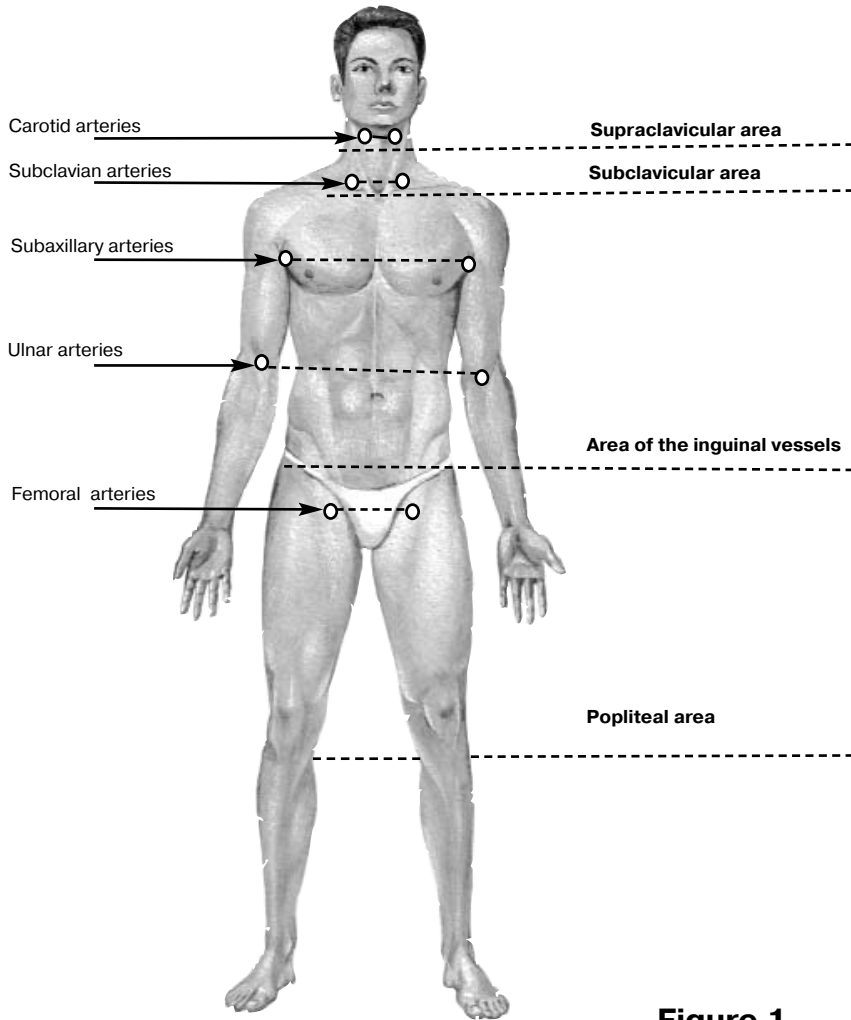
The mechanism of the curative influence of quantum hemotherapy is common in different pathologies. The manifested effect of quantum hemotherapy is connected with the influence of quantum emission on the metabolism. Oxidation of energetic materials like glucose, pyruvate, lactate leads to improvement of microcirculation and tissular oxygen utilisation. Changes in the system of microcirculation are connected with vasodilatation and changes of rheologic properties of blood because of the decrease of its viscosity and aggregating activity of erythrocytes. It was observed that after quantum irradiation the level of fibrinogen exceeding the norm by 25-30%, went down by 38-51%. When its value is low before treatment, it could rise by 100% after quantum therapy. Quantum hemotherapy is used as analgetic, antioxidant, desensitizing, bioactivating, immunoactivating and immunocorrecting, detoxicating, vasodilating, antiarrhythmic, antibacterial, antihypoxic, antiedematose and antiinflammatory remedy.

Clinical tests have made it possible to determine secondary effects of quantum hemotherapy which lead to a well-manifested therapeutic effect:

- improvement of microcirculation: thrombocyte aggregation is inhibited, their flexibility is increased, fibrinogen concentration in plasma is decreased and fibrinolytic activity is enhanced, blood viscosity is down, rheologic blood properties are improved, tissues are better provided with oxygen;
- ischemia in organ tissue is decreased or disappears; heart outflow increases, general peripheral resistance decreases, coronar vessels dilate, tolerance of strain increases;
- normalization of energetic metabolism of cells subjected to hypoxia or ischemia, accumulation of cyclic AMP in cells, preservation of cell homeostasis;
- antiinflammatory action due to the inhibition of liberation of histamine and other mediators of inflammation from mast cells, prostaglandin synthesis suppression, normalization of capillar permeability, diminution of pain and edematose syndromes;
- immunocorrection: increase of the general level of T-lymphocytes and lymphocytes with suppressive activity, increase of T-helper content without decrease of leucocyte level in peripheric blood, decrease of IgA, IgI level;
- influence on lipid peroxidation processes in blood plasma;
- lipid metabolism normalization.

Referring to the above, it becomes clear that quantum hemotherapy due to its curative properties could be prescribed at a wide range of diseases.

Sometimes this kind of quantum therapy is prescribed since the first days of a disease, and sometimes, in the period of convalescence; it is carried out at the frequency 50 Hz, **on one of two symmetric zones**, 10 minutes on the area of large vessels. For example: on the area of the vessels of cubital fossa - 10 min on the right or on the left ulnar area. A similar procedure can be done in the region of the inguinal vessels, or popliteal vessels, or supra- or subclavicular vessels **on one of the zones mentioned above** (Fig. 1).



**Figure 1**

Seances are to be conducted once a day, in the morning. The first course of treatment consists of 5...7 seances. The 2nd and the 3rd courses which are to be done with interval of 1 month after the previous course, could have up to 10 procedures.

Taking into account a possibility of the "secondary exacerbation" resulting from such factors as increasing antioxidant deficiency in blood (α-tocoferol), rising concentration of products of lipid peroxidation and deepening of membrane lipid and phospholipid spectrum shift, it is recommended, from the first day of QT, to take vitamins A, E, C for prevention or stopping this phenomena.

**Contraindications.** Principal contraindications for quantum hemotherapy are diseases of blood with a syndrome of hemophilia, thrombocytopenia below 60000, acute feverish conditions, comatose states, active tuberculosis, hypotonia, decompensated states of cardiovascular, excretory, respiratory and endocrine systems, deep vein thrombosis, premenstrual and menstrual period.

## **INDICATIONS AND CONTRAINDICATIONS FOR QUANTUM THERAPY IN STOMATOLOGY**

### **Indications**

Below there is a list of stomatologic diseases and pathologic processes that can be treated with the help of quantum therapy .

1. Dental diseases of non carious origin
2. Prevention of dental caries and its complications
3. Prevention of pulpitis and its complications
4. Prevention of apical pericementitis
5. Prevention of diseases of parodontium
6. Quantum therapy of diseases of mucous membrane of the oral cavity
7. Quantum therapy of stomatoneurologic diseases
8. Arthritis, arthrosis of temporomandibular articulation
9. Treatment of decubitus, ulcers, erosions of the oral cavity
10. Treatment of painful syndrome after root canal filling
11. Treatment of inflammatory diseases of maxillofacial region
12. Treatment of pericoronitis
13. Postoperative quantum therapy

## Contraindications

The list of contraindications for applying quantum therapy is very limited:

- Influence onto a suppurative focus (abscess, phlegmon, and so on) if no pus discharge is provided
- Septic, acute infections and febrile states of diseases with uncertain etiology
- Diseases of hematopoietic system
- Diseases of central nervous system (schizophrenia, epilepsy)
- Oncology diseases

Important note: Before applying quantum therapy to the treatment of the mucous membrane of the oral cavity and of the dental solid tissue as well as inflammatory diseases of temporomandibular region, it is necessary to get a consultation of a dentist or his intervention, if needed.

## PROPHYLAXIS AND TREATMENT OF DENTAL DISEASES

### Diseases of dental hard tissues of non-carious origin

These diseases include troubles of metabolic processes in the superficial dental layer (enamel, dentin).

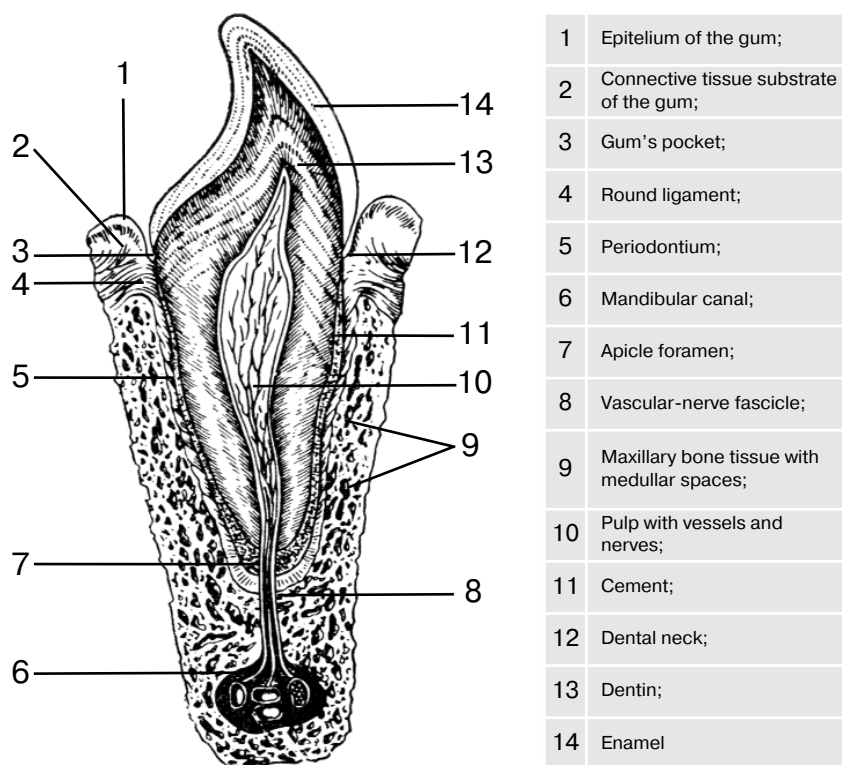
**Enamel hypoplasia** looks as chalk-like dull spots on the symmetric teeth.

**Enamel erosion.** More deep enamel troubles arriving to the limit of the next layer, that is, at the level of the enamel-dentin delimitation.

**Wedge-shaped defects.** They are characterized by receding of bone tissue near gum's edges, having a look of triangular cut.

**Pathological enamel erasability.** The pathological enamel erasability is a progressing (decompensated) process of the dental bone tissue receding accompanied by a combination of modifications of aesthetic, functional and morphological character in dental and peridental tissues, chewers and temporomandibular joints.





**Figure 2**

These diseases develop with various intensity and various manifestations. Patients can claim increasing cosmetic defect or sensibility to chemical, temperature or mechanical stimuli.

Causes of these diseases are frequently connected with troubles on the neuroendocrinal level. Often they have hereditary character. The basis of the development of these processes is a trouble of mineral metabolism.

Prevention of such diseases should be directed to the rebuilding of mineral metabolism. Quantum therapy applied together with taking of calcium-containing preparations gives positive results. Hypoplastic foci and erosive defects acquire natural color with brilliant surface.

Wedge-shaped defects and erasable surfaces are also characterized

by different manifestations.

Generally the surfaces become even and dense, the sensibility decreases or disappears completely. Even in case of significant loss of tissue, it is recommended to conduct restauration after remineralizing therapy.

Treatment area	Frequency	Exposure time
Scanning each jaw in the region of dental neck projections. Nozzle #2	50 Hz	5-10 minutes

Quantum therapy is conducted every other day. One treatment course consists of 7-10 seances. In presence of somatic manifestations often accompanying these diseases, it is recommended to add general methods of quantum therapy for harmonization of all body systems (the universal rehabilitation program). Treatments should be done every other day.

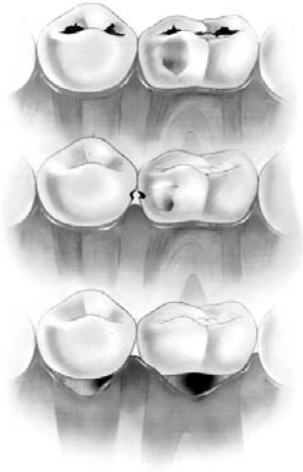
As a rule, patients point out that their general state improves considerably: better sleeping, lesser irritability, functioning of all the systems and organs well improved.

#### Classification of non-carious affections of teeth

1. Affections of teeth appearing during the period of follicular development of their tissues, that is, before teeth eruption:
  - a) Enamel hypoplasia;
  - b) Enamel hyperplasia;
  - c) Endemic fluorosis of teeth;
  - d) Anomalies of development and eruption of teeth, change of their colour;
  - e) Hereditary troubles of teeth development.
2. Affections of teeth appearing after their eruption:
  - a) Pigmentation and plaques;
  - b) Hard tissues abrasion;
  - c) Clinoid defect;
  - d) Dental erosion;
  - e) Dental hard tissue necrosis;
  - f) Trauma of teeth;
  - g) Hyperstesia of teeth.

## Prevention and treatment of caries

Caries is a microbial chemical destruction of hard tissues (Fig.3). Microbial flora of a dental "plaque", or deposit, enddamages the organic base of tooth enamel, and that is why in this place the mineral substrate fixation is damaged (Fig. 3). Stability to the caries is provided by:



- enamel structure (genetic factor),
- hygienic habits (see above),
- immune system condition.

Besides careful following the rules of hygiene, prevention of caries is assured by general restorative measures intended to increase the immunity as well as to sanitize chronic pathological foci in the body. It is well known that an intensification of carious processes should warn the doctor to pay attention to the general condition of the organism.

**Figure 3**

Treatment area	Frequency	Exposure time
Affected tooth, using the nozzle #1	50 Hz	1-2 minutes

Treatment of plural caries needs quantum therapy application on parotid and (or) submaxillary glands in order to activate immunoglobulin generation and to reduce saliva viscosity.

Treatment area	Frequency	Exposure time
Projection of parotid and submaxillary glands, using the nozzle #3	1000 Hz, then 50 Hz	1-2 minutes 1-2 minutes

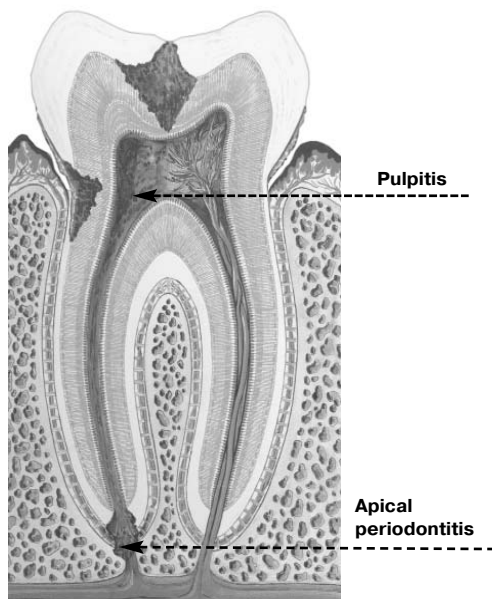
Number of procedures - up to 5...8.

## Prophylaxis and treatment of pulpitis

The progress of caries results in involving vascular nerve bundle (tooth pulp) in the inflammatory destructive process; pulpitis is present (Fig. 4).

Depending on the stage of process, clinical manifestations may be acute spontaneous pain in the affected tooth, painful response to thermal irritants, eccentric pain, eventual putrid breath, subfebrile temperature.

Preventive measures are directed to prophylaxis and treatment of caries. To conserve the pulp, it is recommended to conduct quantum therapy on the region of apical hole. Improved results could be obtained if besides the local irradiation the general restorative course and the therapy of chronic diseases are carried out.



**Figure 4**

Treatment area	Frequency	Exposure time
Affected tooth, using the nozzle #2.	50 Hz	1...2 minutes

## Prophylaxis and treatment of apical periodontitis

**Periodontitis** is an inflammatory process growing in the tissue surrounding the tooth root. It is a lesion of the pulp. Similarly to the pulp lesion, it is a result of caries (Fig. 4).

The localisation of the inflammatory process in the periodont can be different: in the region of the apex (apical), in the region of gum edge (marginal), embracing all the tissue of tooth (diffusive). Apical periodontitis in most cases develops because of the inflammation and ensuing necrosis of pulp, when microbes moving from the carious cavity along the duct penetrate beyond the apical foramen of tooth and an inflammatory process develops in periodontal fissure.

The manifestation of the signs of periodontitis is much more serious. Painfulness at the touching, mobility of the tooth, gum swelling, painful and enlarged lymphatic regional glands, increase of temperature up to 37-37,5°C, general weakness, ESR - 15-30 mm/hour, leucocytosis are proper to this condition.

Patients often calm down after having rinsed, having applied a compress on a someone's recommendation, or having got assisted by a dentist (who applied emergency measures to eliminate the inflammation). They decide that if there is no more pain or fever, then all is finished. It is an illusory feeling, because the process transforms to a chronic form and proceeds sluggishly. Sometimes there is a feeling of discomfort in the tooth, bad breath, swelling of the gum, headaches. Mouth rinse leads to calming down the symptoms (because an evacuation of exudation is provided). An exacerbation of the disease brings the patient to his dentist who observes at his X-ray picture different forms of a neglected process:

- fibrous periodontitis, when there is a a small enlargement of periodontal fissure on the X-ray picture;
- granulating periodontitis, when on the X-ray picture, besides the enlargement of the periodontal fissure with unsharp outlines, there is a focus of irritation (destruction) of bone tissue of the size of 3...5 mm;
- gradulomatous periodontitis, when there is a focus of destruction of the size of 5... 10 mm on the X-ray picture.

This tooth could be saved by lot of efforts of the dentist.

Quantum therapy of chronical forms of inflammation is carried out along with a treatment by a dentist. Depending on the form of periodontitis (fibrous, granulating, gradulomatous) and on the stage of process, the doctor chooses a method of treatment.

To stop the inflammation, one carried out a course of quantum therapy on the region of the root apex.

Treatment area	Frequency	Exposure time
Root apex of the affected tooth, using the nozzle #2	1000 Hz, then 50 Hz	1-2 minutes 1-2 minutes

The activation of bone tissue regeneration is conducted in the following mode:

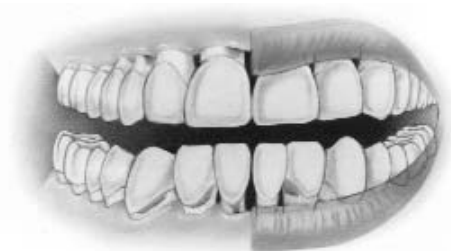
Treatment area	Frequency	Exposure time
Apex of the affected tooth root using the nozzle #2	1000 Hz,	1 minute
	then 50 Hz,	1 minute
	then 5 Hz	1 minute

The course of treatment consists of 5...8 seances.

To activate immunity and normalize internal organs and systems functioning it is recommended to make a course of 5...7 seances of quantum hemotherapy.

## Prophylaxis and treatment of parodontum diseases

The most common cause of the loss of teeth is parodontum diseases. Parodontitis is an inflammatory disease of parodontal tissues accompanied by the progressing destruction of the alveolar process.



**Figure 6**

Parodontitis is a systemic lesion of parodontum in form of progressing atrophy of alveolar processes (Fig. 6). Nowadays diseases of parodontum are considered among autoimmune processes. According to the data of WHO, 100% of the adult population and 45% of the children suffer from these diseases in differently pronounced forms of the process.

Causes of the diseases are:

- failure to comply with rules of personal hygiene;
- peculiarities and character of nutrition: absence of hard food in the ration, albuminuos insufficiency, vitamin and mineral insufficiency, high content of sugar (bread, macaroni, chips, ketchups, mayonnaise);
- reduction of immune defence against a growing microbial aggression;
- medicinal dependence. Antispasmodic and analgetic preparations reduce saliva generation. Contraceptive preparations, cytostatics, antibiotics, hormones reduce leucocyte and lymphocyte activity;
- various endocrine pathologies;
- chronic diseases: diabetes, kidney pathologies, rheumatism and others;
- age alteration;
- occlusion pathologies, inherent or acquired. Edge fixation of bridles (frena)?;
- genetic predisposition (72%);

- stress, depression (87%);

Prophylaxis and treatment of such a serious diseases of parodontum is defined by the degree of the process manifestation and the elimination or reduction of the influence of the above mentioned causes.

Clinical manifestations are redness or cyanosis of gum edges, soreness, stomatorrhagia, friability of gum edges. Mouth hygiene and eating become difficult. A considerable quantity of soft dental plaque with aggressive microflora appears along the gum edge. The process develops with exacerbations in the form of soreness at biting, stomatorrhagia in certain parts of the gum, swelling and itch. The disease can be accompanied by subfebrile temperature. The examination shows the presence of the dental plaque, dental calculus; the gum edges enclose the tooth neck loosely. The atrophy of the gum edge is observed.

The generalization of the process is accompanied by teeth mobility, difficult eating and oral hygiene, bad breath, pain at biting, headaches. Temperature could rise up to 38...39 grade.

Quantum therapy can be applied at the earliest stages. Irradiation of certain parts of the affected gum can reduce the inflammation.

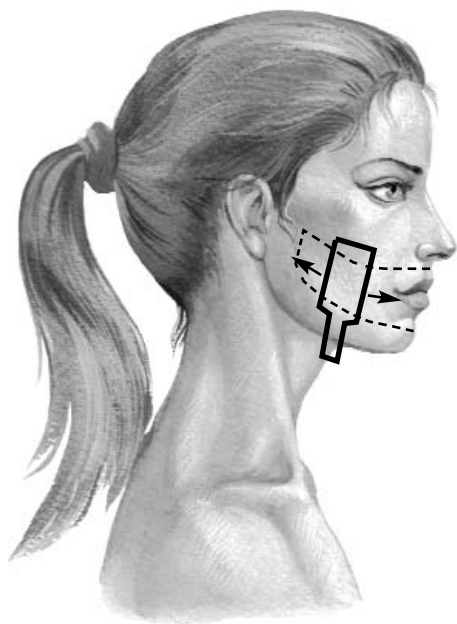
Treatment area	Frequency	Exposure time
Region of the affected gum using the nozzle #2 .	1000 Hz	2 minutes

It is possible to influence the affected area through the skin, too. Frequency 50 Hz, exposure time 2...3 minutes are recommended.

Quantum therapy conducted at the generalization of the process, besides a local impact, has another action, stimulating osteogenesis. To accomplish this procedure with the highest effectiveness, it is recommended to use the emitter "Douche 1" (Fig. 7).

A course of treatment consists of 10 procedures minimum. Further courses are carried out in a month after the end of the previous course. Taking into account cause-and-effect factor, it is recommend-





**Figure 7**

ed to alternate local impact seances with the action on the whole organism using quantum hemotherapy.

According to a statement of the M.D.Sci, professor T.N.Modina:"Microbial aggression must be stopped from within" by enhancing the defence of the organism.

In presence of various concomitant diseases quantum therapy also has a general positive influence at all stages of the process development . Its application results in the improvement of cardiac activity, decrease of bronchial asthma attacks, calming down of the exacerbation of osteochondrosis in the cervical- thoracic region of the spine, weakening of pain in the joints at rheumatic polyarthritis, elimination of acne, growth of activity, vivacity, improvement of sleep. All the "accompanying" improvements are obtained without a purposeful action on the above mentioned structures. That is why we have given a short information on clinical and diagnostic fields.

Tumors and tumor-shaped changes of parodontum (epulis, fibromatosis etc.) are contraindications for quantum therapy.

## Quantum therapy of the mucous membrane of the oral cavity



Recurrent aphthous stomatitis

**Figure 8**

The most frequent kind of stomatitis are aphthous, herpetic, ulcerative nectotic, recurrent chronic and mycotic stomatitis.

Aphthous stomatitis and recurrent chronic stomatitis are considered as a systemic lesion of oral mucosa of gastrointestinal tract. All kinds of stomatitis are related to a poor condition of gastro-intestinal tract provoked by dyskinesia, dysbacteriosis, sequences of hormone and antibiotics taking.

Treatment area	Frequency	Exposure time
Affected area using the nozzle #2	1000 Hz, then 50 Hz	2 minutes 2 minutes

A positive effect is observed after 3...4 seances.

## Quantum therapy of stomatoneurological diseases

Neuralgia and trigeminal neuritis, glossalgia are very serious stomatological diseases. Their causes remain unclear.

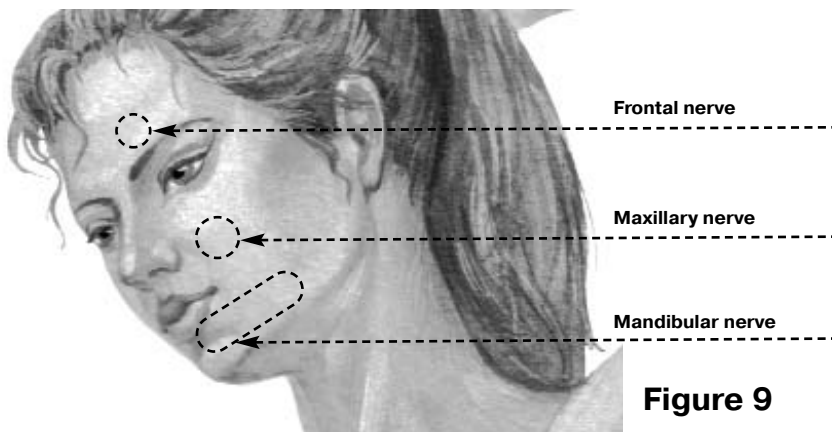
Patients suffer acutely, they are angry.

Treatment area	Frequency	Exposure time
Painful zones - non-contact irradiation (without touching) using the nozzle #3	1000 Hz, then 50 Hz	2 minutes 2 minutes

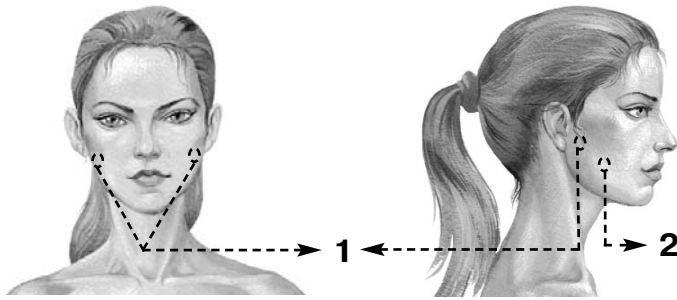
A course consists of 10...15 seances.

We recommend to combine quantum therapy with taking vitamins, minerals, sedative herbal preparations.

The treatment must be assisted by endocrinologist, neuropathologist, psychoneurologist.



## Arthroso-arthritis of the temporomandibular articulations



**Figure 10**

Inflammatory dystrophic diseases of the temporomandibular articulations can be provoked by a trauma, including abnormal occlusion, or ingress of infection at angina, scarlatina, parotitis, otitis, mastoiditis.

Light cases are characterized by a pain increasing while moving the mandible, small swelling near the tragus, painful palpation from outside and from inside the oral cavity.

Acute inflammation, especially purulent, is accompanied by an acute pain, irradiating to the ear or temple - the patient can not open the mouth.

In such cases it is necessary to establish a differential diagnosis between arthritis, pulpitis and periodontitis. It is important because

Treatment area	Frequency	Exposure time
Projections of articulations from both sides (1) using the nozzle #3 (Fig. 10) not depending on that whether the process is localized on one or both sides. Quantum irradiation on the chewer localized near the corner of the mandible (2) is effected by scanning method from the affected side only.	Variable  1000 Hz	2 minutes of every frequency on each zone

a prescription of warming procedures for arthritis will provoke an exacerbation of pulpitis and periodontitis. The immobilization would lead to the exacerbation of the process, too, because the articulation is paired. The immobilization is realized by applying an elastic bandage and a rubber spacer between teeth.

Quantum therapy can be conducted together with the prescription of antiinflammatory remedies. The course of treatment consists of 5 to 10 procedures. As soon as the patient can open the mouth, it becomes possible to use the nozzle #2 to influence the indicated areas from inside the oral cavity, at frequency 1000 Hz - 1 minute, 50 Hz - 1 minute.

## **Treatment of decubitus, ulcers, erosions of the oral cavity**

Decubitus, erosions, decubital ulcers are frequently encountered complications provoked by use of removable dentures, overhanging fillings, edges of crowns. First of all, it is necessary to find out and to eliminate the cause of the process. Foci of lesion are subject to quantum therapy using the nozzle #2. Before the seance, it is recommended to smear the surface of focus with Lugol's solution (strong iodine).

<b>Treatment area</b>	<b>Frequency</b>	<b>Exposure time</b>
Focus of lesion	1000 Hz	2 ...5 minutes
	50 Hz	2 ...5 minutes

After a QT-seance, the surface is to be smeared with oil of wild rose or oil solution of vitamin A. A course of treatment consists of 5 to 8 seances. Appropriate measures must be taken to exclude the traumatising factor (use of the denture) until the complete epithelization of the injured surface.

## **Treatment of pain syndrome after root canal filling**

Pains after root canal filling could be conditioned by the individual sensibility, response to irritation of filling material, pressure of filling material on periodontal tissue. To avoid complications, straightway after the root canal filling it is recommended to carry out a course of quantum therapy on the region of root apex projection.

<b>Treatment area</b>	<b>Frequency</b>	<b>Exposure time</b>
projection of apex radialis dentis	1000 Hz	2 ... 5 min
	50 Hz	2 ... 5 min

Painful response could appear the next day or even later. That is why it is better to start quantum therapy course straightway after the intervention of stomatologist. The course consists of 2...3 sessions conducted once a day.

## **Treatment of inflammatory diseases in the maxillofacial region**

The most frequent inflammatory disease in maxillofacial region is inflammation of walls of the extracted tooth cavity (alveolitis). Its cause could be an infection from the diseased tooth, traumatizing tooth extraction, late formation of fibrinous coagulum. Alveolitis is accompanied by a strong pain, sometimes, a fever. Quantum therapy is better to be applied transcutaneously. The emitter is put on the projection of the extracted tooth.

Treatment area	Frequency	Exposure time
projection of the extracted tooth	1000 Hz 50 Hz	2 minutes 2 minutes

A treatment course consists of 5...7 seances. If pains continue, quantum therapy is to be conducted transcutaneously by scanning along the fascicle, from the extracted tooth to the temporal and postero-auricular region, at frequency 50 Hz, during 5 min. Additionnally irradiation is to be applied from the oral cavity using the light-guide nozzle #2. The emitter is put over tooth cavity, frequency is 50 Hz, exposure time 2min.

## Treatment of pericoronitis

Pericoronitis is an inflammation of the overhanging gum over the crown of an erupting tooth. Often it happens in the region of "wisdom teeth". To prevent this problem, it is possible to cut the overhanging edge of the gum at rest, that is at the "cold" period. If there is already an inflammation, no operation is carried out. It could be prescribed a rinse 6 to 8 times daily and antiinflammatory therapy. Quantum therapy is effected from the side of oral cavity using the nozzle #1.

Treatment area	Frequency	Exposure time
Affected foci and submaxillary lymphonodus	1000 Hz 50 Hz	2 minutes 2 minutes

The emitter is placed on the area of inflammatory focus projection transcutaneously and on submaxillary lymphonodus. The treatment course consists of 5 to 6 procedures, one procedure a day.

## **Post-operative quantum therapy**

Abcesses, furuncles, phlegmons, osteomyelitis demand a surgical intervention. After opening of the suppurative focus, quantum therapy is recommended in order to eliminate pain, inflammation, to prevent complications. The emitter is placed on the skin in the projection of the inflammatory focus. Frequency 1000 Hz, then 50 Hz, 2 minutes in each mode. Similar mode is used when QT is applied to the region of local lymphonodus.

**Remember that it is strictly prohibited to apply quantum therapy on the foci of purulent inflammation if there is no pus outflow.**



## **CONCLUSION**

Dear colleagues!

This methodical manual is the second edition prepared by the JSC "MILTA-PKP GIT" and completely dedicated to the problems of the application of quantum therapy in stomatology.

We described methods of treatment of various stomatological diseases created and approved in practice by the authors.

The doctors using this manual as a basis for research and practical application, with accumulation of the own experience, could modify and further develop these recommendations.

We shall be grateful for your suggestions and statistical data on your patients and effectiveness of quantum therapy.

Team of the JSC "MILTA-PKP GIT"

### **Methodical recommendations for application of RIKTA® family devices**

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