PE «KVID-TV»

PULSED MAGNETIC MEDICAL APPARATUS

MILA-1

APPLICATION MANUAL

CONTENT

INTRODUCTION

Application manual is developed for the magnetic-pulse medical apparatus "MILA-1" (hereinafter referred to as the apparatus) to be studied and applied in the hospital practice.

The instruction contains information on the rules of application, service and transportation.

The apparatus is manufactured at the PE "KVID-TV" enterprise (Ukraine, 39600, Kremenchuk, vul. I. Mazepa, 34/47, k.1, e-mail: sfkvid@gmail.com).

The effect of the external magnetic fields (MF) on living organisms, as well as the magnetic fields induced in a living organism, are studied in the section of biophysics – magnetobiology. Electrically charged elementary particles, electric currents and magnetized objects take part in magnetic interactions.

One of the main characteristics of the magnetic field is the magnetic induction (density of the magnetic flux within the area limited by a closed circuit), its unit of measure is Tesla (T).

Physiological and therapeutic effects of magnetic fields are based on the effect of induction currents in organism's conducting media, as well as the magneto-mechanical effect on bioelectric processes. The nervous, endocrine and cardiovascular systems are the most sensitive to the magnetic fields. As the MF primarily affects the regulatory systems, it can be widely used in the complex treatment of various diseases.

The magnetotherapeutic effect in cosmetology leads to ridding of cellulite nodes, reducing the hypodermic fat, increasing skin's elasticity, restoring skin's normal tone and moisture, rapid healing of hematomas, scars, etc. Magnetotherapy application in cosmetology is based on anti-edematous, regeneration, neuromyostimulation and other effects.

The site of the MF activity is usually determined by usually determined by the localization of the pathological process or the affected organ and the area of its projection onto the skin. The effect on Zakharin-Ged reflexogenic zones as well as on biological active points is the most effective in certain situations. One of the most effective modern method of magnetic fields therapy is highly intensive pulsed magnetotherapy. The peculiarity of this method is the short-time effect of magnetic field pulses of high amplitude of magnetic induction (up to 1-2 T) and high porosity.

1. PURPOSE

The apparatus is intended for the treatment of the following diseases: hypertonic disease, obliterating diseases of the vessels of the lower limbs (obliterating atherosclerosis, obliterating endarteritis); chronic non-specific diseases of the lungs (chronic bronchitis, bronchial asthma), bronchial asthma; arthrosis - arthritis, osteochondrosis, traumatic injury of the musculoskeletal system, inflammatory and atrophic changes in the skin after surgical and radiation therapy, trophic ulcers of the lower limbs, chronic prostatitis, neuritis and neuralgia of the sciatic nerve; inflammatory diseases of the muscles (myositis, soft tissue bruise); eyes diseases – iridocyclites, iritis, keratitis, dystrophic processes on the fundus and the optic nerve, cornea and sclera injuries, intraocular hemorrhages, eyelashes diseases (blepharitis, hordeolum, cholizions); ENT diseases – acute and chronic otitis, auricle pericondrites, sinusitis, frontitis, etiomyiditis, acute laryngitis, chronic tonsillitis, vasomotor rhinitis, consequences of nose bones fractures; trigeminal neuralgia; dental diseases – gingivitis, periodontitis, periodontal disease and others.

The apparatus is also intended for application in cosmetology for the following tasks: hypodermic fat reducing; cellulite nodes cleavage; skin’s elasticity increasing; skin’s moisture and tone normalization; skin’s healthy appearance; effective healing of wounds, injuries, hematoma and others.

The apparatus work in 2 ranges, each of which is divided into 6 modes, which differ in the amplitude of magnetic induction. So it makes possible to choose the most optimal modes of the treatment procedure depending on a disease and patient's sensitivity to the pulsed magnetic field.

1.1. Normal conditions of apparatus application are the following:

- ambient temperature, ^{0}C – + 25 ± 10;
- relative humidity,% – from 45 to 80;
- atmospheric pressure, kPa – from 84 to 106,7 (from 630 to 800 mm Hg);
- power supply voltage, V – 220 ± 22;
- frequency of the power supply, Hz – 50.

1.2. According to risky application the apparatus is classified as IIa Class in the State Standard 4388: 2005.

1.3. According to the working conditions, the apparatus refers to products for moderate and cold climate of 4.2 category in the State Standard 15150 and the State Standard 15543.1.

1.4. According to the class of electrical safety, the apparatus refers to II Class of B Type in the State Standard R 50267.0-92 (MEK 601-1-2-93).

1.5. According to consequences of failure, the apparatus refers to B Class in the State Standard 50444 and Branch Standard 50-707-91.1.2., and it requires scheduled maintenance.

1.6. According to mechanical effects, the apparatus refers to 2 Group in the State Standard R 50444-92.1.1.6.

2. TECHNICAL CHARACTERISTICS

The technical characteristics of the apparatus should correspond to the following data:

2.1. Number of pulses of the magnetic field in the pulsing - 2;

2.2. The amplitude of the first pulse of the magnetic induction is:

In the first range (No 1coil), T:

mode 1 - not less than 1,2;

mode 2 - not less than 1,0;

mode 3 - not less than 0,8;

mode 4 - not less than 0,6;

mode 5 - not less than 0,4;

mode 6 - not less than 0,2;

In the second range (No 2coil), mT:

mode 1 - not less than 120;

mode 2 - not less than 100;

mode 3 - not less than 80;

mode 4 - not less than 60;

mode 5 - not less than 40;

mode 6 - not less than 20.

2.3. The amplitude of the magnetic induction of the second pulse is 50 % of the selected mode value;

2.4. The duration of the first and second pulses of the magnetic induction at the level of 0.1 amplitude in all modes, s: not less than $5x10^{-4}$;

2.5. Time interval between pulses is not more than 80 ms;

2.6. Pulses form - bipolar;

2.7. The set time for the treatment procedure can be selected from 5 minutes, 10 minutes and 15 minutes in any mode;

2.8. Time of apparatus's readiness after switching on the power supply is 5 minutes;

2.9. The power supply of the apparatus is 220V at the following indicators of electricity:

- voltage deviation + 10 / -15%;
- transient voltage deviation +/- 20% of duration 0,1 sec;
- frequency deviation +/- 2%;
- transient frequency deviation of +/- 3% for a duration of 1.3 seconds;
- power consuPMTion, W: not more than 80;

2.10. Cycle mode:

- operating time for one cycle, min: not more than 15;
- time of a break after a cycle, min: not less than 10;

2.11 Time of continuous cyclical operation, h: not more than 8;

2.12. Weight, kg^ no more than 6.

2.13. Overall dimensions (excluding the length of the cord and inductor), mm: not more than:

apparatus: length, width, height - 438x195x129;

inductor: length, width, height - 170x100x30.

3. FULL SET

3.1. The set includes:

1. Magnetic impulse medical apparatus "MILA-1" – 1 piece.
2. Inductor – 2 pieces.
3. Power cord – 1 piece.
4. Flexible holder of the inductor No 2 – 1 piece.
5. Magnetic impulse medical apparatus "MILA-1" – 1 piece.
6. Application Manual.

4. APPARATUS AND HOW TO WORK WITH IT

4.1 The front panel of the apparatus is equipped with the following controls and displays:

- power switch;
- LED power-up indicator;
- "Start" button is for starting the treatment procedure;
- "Stop" button is for emergency stop of the treatment procedure;
- "Work" indicator shows that the treatment procedure is being carried out;
- "Procedure Time" buttons «∨» and «∧» are for selecting the time of the treatment procedure (see 2.7);
- "Procedure Mode" buttons «∨» and «∧» are for selecting the mode of the treatment procedure (see 2.2);
- digital indicators for selected time and mode of the treatment procedure.

The front panel of the apparatus is shown in Fig. 1

Figure 1. The front panel of the apparatus: 1 - the name of the apparatus; 2 - power switch; 3 - LED power switch; 4 - Start button; 5 - Stop button; 6 - Work indicator; 7 - digital indicator of the selected treatment procedure; 8 - digital indicator of the selected time of the treatment procedure; 9 – “down” button for selecting the procedure mode; 10 – “up” button for selecting the procedure mode; 11 - “down” button for setting the time of the procedure; 12 - “up” button for setting the time of the procedure.

4.2. The apparatus is equipped with two inductors. The first inductor generates magnetic field pulses in the range of 1.2 ÷ 0.2 T, the second inductor generates magnetic field pulses in the range of 120 ÷ 20 mT (see 2.2). The apparatus with two inductors is shown in Fig. 2

Figure 2. The apparatus with inductors: 1 - No 1 inductor (indicated by 1 on the housing of the inductor); 2 - No 2 inductor (indicated by 2 on the housing of the inductor).

4.3. On the back panel of the apparatus there are:

- "INDUCTOR" connector for connecting the inductor;
- "POWER" connector for connecting 220V mains cord;
- one 3A fuse.
- manufacturer’s information.

WARNING! When performing a treatment procedure, it is prohibited to press any buttons located on the front panel of the apparatus, except for the STOP button when you need to stop the treatment procedure.

WARNING! When the apparatus is switched on, it is forbidden to change the inductors.

5. SAFETY INSTRUCTIONS

5.1. The personnel allowed to work with the apparatus should study this manual first.

5.2. External inspection of the apparatus is required before its application.

5.3. The apparatus should be placed not far from plugging to the socket to avoid the tension of the power cord.

5.4. Avoid moisture penetration into the apparatus during disinfection. Protect the apparatus from dampness, shaking and shock.

5.5 Apparatus operation with damaged housing is NOT ALLOWED!

5.6. Total time of the procedure is not more than 15 minutes.

5.7. When working with the apparatus, medical staff is not advised to bring the inductor's harness closer than 5 cm.

5.8. When working with the apparatus, medical staff and patients need to take off watches and mobile phones.

5.9. When repairing the apparatus, its cover can be removed not earlier than 10 minutes after unplugging from mains.

6. PREPARATION FOR WORK

6.1. Before unpacking keep the apparatus in a warm and dry environment at an ambient temperature of +15 to $+40^0$C for 4 ÷ 6 hours after transportation or storage it at an air temperature below $+5^0$C.

6.2. Make an external inspection of the apparatus first, the apparatus must not have mechanical damage, which make its operation unacceptable.

6.4. Connect the appropriate inductor to the INDUCTOR connector on the back panel of the apparatus.

6.5 When connecting No2 inductor, if it’s necessary, install a flexible holder.

6.5. Disinfect external surfaces of the apparatus with disinfectant solutions by double wiping with an interval of 10-15 minutes between wipings;

6.6. Plug the apparatus in.

6.7. Turn on the "POWER" switch (Fig. 1, 2), the power-on indicator lights up (fig. 1, 3). After 30 seconds, the apparatus is ready for operation.

7. WORK ORDER

7.1. Use «∨» or «∧» buttons (fig. 1, 9, 10) to select the time from three possible options for procedure duration. The following values will be displayed on the digital indicator: 05t1 – for 5-minutes procedure; 10t2 – for 10-minutes procedure; 15t3 – for 15-minutes procedure.

7.2. Use «∨» or «∧» buttons (fig. 1., p. 11, 12) to select the mode from six possible operation modes of a certain range. The range is set automatically when the corresponding inductor is connected. The following values will be displayed on the digital indicator:

For the first range (No 1 inductor)

1.2 1 (1.2 T, range 1)

1.0 1 (1.0 T, range 1)

0.8 1 (0.8 T, range 1)

0.6 1 (0.6 T, range 1)

0.4 1 (0.4 T, range 1)

0.2 1 (0.2 T, range 1)

For the second range (No 2 inductor)

1.2 2 (120 mT, range 2)

1.0 2 (100 mT, range 2)

0.8 2 (80 mT, range 2)

0.6 2 (60 mT, range 2)

0.4 2 (40 mT, range 2)

0.2 2 (20 mT, range 2)

When the apparatus is turned on default, the mode is set to 0.6 according to the connected inductor, and the time of the treatment procedure is 10t2.

7.3. Press the "Start" button (fig.1.4) to start the treatment procedure, the "Work" indicator (Figure 1., 6) lights up.

7.4. The completion of the procedure is indicated by going the "Work" indicator out and beeping.

7.5. To repeat the treatment procedure it is necessary to wait not less than 10 minutes.

7.6. To interrupt the treatment procedure beforehand, press the "Stop" button (fig. 1., 5), after that the "Work" indicator goes out and beeping sounds.

8. POSSIBLE FAULTS AND REPAIR

8.1. "Power" indicator doesn’t light, the apparatus doesn’t work. Check for supply voltage. Check and replace the fuse, if it’s necessary.

8.2. The repair is carried out by the manufacturer or the repair organization.

9. MAINTENANCE

9.1. Maintenance is performed by service personnel before starting work. It includes:

- external inspection;
- check for the connection of the induction harness to the connector on the back panel of the apparatus;
- check for the connection of the power cord to the connector on the back panel of the apparatus.

10. DISINFECTION INSTRUCTIONS

10.1. Disinfection of the external surfaces of the inductor should be performed after each treatment with a 3% solution of hydrogen peroxide with 0.5% solution of detergent.

11. GENERAL INDICATIONS AND CONTRAINDICATIONS FOR APPARATUS APPLICATION

11.1. Indications:

- ✓ Diseases of the cardiovascular system:
  - o hypertonic disease of the I-II stage;

- o obliterating atherosclerosis;
- o obliterating endarteritis of limbs vessels.

✓ Chronic non-specific pulmonary diseases:

- o chronic bronchitis, obstructive bronchitis, pneumonia;
- o bronchial asthma.

✓ Inflammatory and degenerative-dystrophic lesions of the musculoskeletal system:

- o arthrosis-arthritis;
- o osteochondrosis;
- o cervical, thoracic, lumbosacral sciatica;
- o synovies, tendovaginitis, epicondylitis;
- o fractures of the upper and lower limbs.

✓ Inflammatory and dystrophic changes of the skin after radiation and surgical treatment.

✓ Varicose veins of the lower limbs.

✓ Trophic ulcers of the lower limbs.

✓ Inflammatory diseases of the muscular system - myositis.

✓ Traumatic, inflammatory diseases of the peripheral nervous system:

- o plexit;
- o neuralgia of the trigeminal, facial, intercostal nerves.

✓ Chronic prostatitis.

✓ Eyes diseases:

- o Iridocyclitis;
- o Iriti;
- o keratite;
- o dystrophic processes on the fundus and the optic nerve;
- o cornea and sclera injuries;
- o intraocular hemorrhages;
- o diseases of the eyelashes (blepharitis, barley, cholizions).

- ✓ Disease of ENT organs:
  - o acute and chronic otitis;
  - o auricle pericondrites;
  - o sinusitis;
  - o frontier;
  - o ethmoiditis;
  - o acute laryngitis;
  - o chronic tonsillitis;
  - o vasomotor rhinitis;
  - o consequences of nose bones fractures.
- ✓ Neuralgia of the trigeminal nerve.
- ✓ Dental diseases:
  - o gingivitis;
  - o paradontitis;
  - o periodontal disease.
- ✓ Cosmetology procedures:
  - o cellulite at any stage;
  - o aging skin;
  - o blood circulation insufficiency;
  - o correction of body shape;
  - o hematomas (bruises);
  - o skin itching;
  - o keloid scars;
  - o edema on the face and body.

11.2. Contraindications:

- ✓ Implanted stimulants.
- ✓ Malignant growth.
- ✓ Propensity to bleeding.
- ✓ Systemic blood diseases.

- ✓ Thromboembolic disease.
- ✓ Fever.
- ✓ Cholelithiasis.
- ✓ Metal objects (fragments, etc.) freely lying in the tissues.
- ✓ Pregnancy.
- ✓ Acute violation of cerebral circulation.
- ✓ Hematopoiesis, signs of pulmonary insufficiency.
- ✓ Necrosis, gangrene.

12. PULSED MAGNETIC THERAPY METHODS FOR DISEASES

12.1 Hypertonic disease

Hypertonic disease treatment by pulsed magnetic field with MILA-1 apparatus is effective at the I-II stage of this disease, when clinical symptoms are functional.

Exposure on the collateral zone and paravertebral ganglia normalizes the autonomic nervous system and arterial pressure, headaches, dizziness and bad heart sensations disappear or appear rarely.

Indications for PMT

1. Clinical and instrumental data confirming the hypertonic disease of I-II stage.
2. Vegetative-vascular dystonia of hypertonic type.
3. Sympathoadrenal variant of hypertonic disease of I-II stage.

Contraindications for PMT

1. Acute cerebrovascular disturbance.

PMT methods

The patient is in sitting position, the treatment starts with exposure on the prognostic zones of the autonomic ganglia of the cervical thoracic spine. The head of the patient is slightly lowered to the chest. The inductor is placed at the level of the first cervical vertebra and it is moved downward para-vertebral to the last chest vertebra, on both sides of the spine. Then the collar zone is treated.

The amplitude of the magnetic induction corresponds to the operating mode 0.6 ÷ 0.2 of the 1 range. The duration of the procedure is 10 minutes (10t2). The treatment

period is 10 procedures.

12.2. Obliterating diseases of the vessels of the lower limbs (obliterating atherosclerosis, obliterating endarteritis)

Pulsed magnetic treatment (PMT) of obliterative diseases of the lower limbs can significantly improve transcapillary exchange and significantly increase the oxygen-transport function of the microvascular channel. Many medical products (reopoliglyukin, solcoseril, trental, etc.) for improving microcirculation give higher therapeutic effect with PMT. PMT is used for the treatment of obliterative diseases of the lower limbs not only because its high biological activity, but easy exposure of large areas of limbs. A promising direction in the treatment of peripheral vascular diseases is the combination of PMT and low-intensive infrared radiation. Such treatment gives the highest clinical effect.

Indications for PMT

1. Clinical data (intermittent lameness, disappearance or weakening of the arterial pulse at different sites, limbs sensitivity to the cold).

2. Data from studies indicating disturbed blood flow in the lower limbs (ultrasound doppler, plethysmography, rheovasography, capillaroscopy, etc.).

Contraindications for PMT

Necrosis and gangrene.

PMT methods

The patient is in lying position. The exposure of the inductor is carried out on the inguinal fold (femoral artery, vein, nerve). Mode of operation is 0.6 of the 1range. The duration of the procedure is 5 minutes (05t1). After that the entire affected limb is treated from all sides from the inguinal fold, including the foot. The mode of operation is 1.2 of the 1 range. The exposure time is 10 minutes (10t2). Treatment period is 10 - 15 procedures.

12.3. Chronic non-specific pulmonary diseases (chronic bronchitis, bronchial asthma)

Chronic bronchitis

Treatment of chronic bronchitis using a highly intense pulsed magnetic field has

vasodilator and bronchodilator effect and reduces inflammatory response, normalizes the autonomic regulation of external respiration. In addition, PMT application promotes the reduction of interstitial and cellular edema in the mucous membrane of lungs and bronchial tubes.

Indications for PMT

1. Anamnestic data of chronic bronchitis, bronchial asthma.
2. Clinical data.
3. X-ray data.
4. Signs of bronchial obstruction according to the data of the study of external respiration.

Contraindications for PMT

Manifestations of hemoptysis, signs of pulmonary haemorrhage.

PMT method for chronic bronchitis

The patient is in sitting position, the mode of operation is 0,6 - 1,2 of the 1range, the front surface of the lungs projection is treated to the middle inguinal line for 10 minutes (10t2). After that the patient is placed on the abdomen and the autonomic ganglia are treated with magnetic pulses. The inductor is arranged paravertebrally and both sides of the spine are treated, the treatment time is 5 minutes (05 t1), the mode of operation is 0.4 of the 1range. After that, in the same mode the intercostal spaces are treated on both sides downwards to the inguinal midline for 10 minutes (10t2). Treatment period is 12 procedures.

Bronchial asthma

PMT methods for bronchial asthma

When bronchial asthma attacks, the patient is in the position of lying on the abdomen, the region of lungs projection is treated with magnetic pulses on both sides for 5 minutes (05t1) in the 0.6 mode of the 1 range. Then in the 0.4 mode of the 1 range – for 5 minutes (05t1), and 1.2 mode of the 1 range – for 5 minutes (05t1). Then the patient is turned over to the back and in the same modes, the lungs projections are treated in the front side. It is possible to carry out 2 – 3 procedures a day.

12.4 Arthrosis - arthritis

Indications for PMT

The clinical signs of arthritis – pain syndrome, limitation of movements in the joint, swelling, joint temperature increase.

Contraindications for PMT

Acute, purulent process in the joint.

PMT methods

The patient is in lying position, the mode of operation is 1.2 of the 1range, the surface of the joint is treated from all sides, the inductor is gradually moved along the surface of the joint after each 2 pulsings of the magnetic field. It is recommended to treat two joints in one day. The time of each joint treatment is 10 minutes (10t2). Treatment period is 10-15 procedures.

When treating the joints of the fingers of the upper and lower limbs, the palmar and rear parts of the hand, and the bottom and upper parts of the foot are treated with the inductor.

12.5 Osteochondrosis

Indications for PMT

1. Disease anamnesis indicating the presence of the spine osteochondrosis with neurological manifestations of Root Syndrome.

2. X-ray examination of the spine confirming the osteochondrosis.

Contraindications for PMT

Malignant growths of the small pelvis and kidney organs (especially in cases of suspected osteochondrosis of the lumbar spine).

PMT methods

During treatment, the patient is placed in a position of lying on the abdomen with maximum straight spine, which is achieved by a system of rollers placed under the chest, abdomen so on.

Regardless of pain localization (cervical, thoracic, lumbar spine divisions), pulsed magnetic field treatment is applied along the spine, starting with the 1st cervical vertebra and finishing with the sacral division. Treatment is carried out in the 0.6 mode

of 1 range. The inductor is in contact with the skin, paravertebral, on both sides in turn. After three sessions, the mode sets in 0.8, after the next three sessions – 1.2 mode of the 1 range. The duration of treatment is 10 minutes (10t2).

When the pain irradiates in buttocks and lower limbs, the pulsed magnetic effect is carried out on the foramenobturatum area and along the buttock and femoral nerves for additional 5 min (05 t1).

The number of procedures is 10 - 15 per a treatment course, but for each patient it is individually depending on the health state.

The treatment effectiveness after the course of PMT is determined by reducing a pain and spine stiffness. Patients with cervical osteochondrosis have got fewer headaches; patients with osteochondrosis of the lumbar-sacral spine division walk better.

12.6. Traumatic damage to the musculoskeletal system

Treatment with high-intensity pulsed magnetic fields has analgesic and anti-edema effect, accelerates resolution of hematoma and hemorrhages in tissues, promotes faster regeneration of damaged tissues and callus formation.

Indications for PMT

1. Injuries in different parts of the joints, bones.
2. Stretching the connection.
3. Closed and open bones fractures.

Contraindications for PMT

1. Growing hematoma.
2. Scheduled surgical intervention after trauma.
3. Susceptibility to bleeding.

PMT methods for injuries of different parts of the joints, bones, ligamentous laxity.

The patient is in lying position, mode of operation is from 0.6 to 1.2 of the 1range. If there are no signs of hematoma, the treatment can be started at the first day after the injury. The inductor is placed on the area of the injured area or ligamentous laxity and moved circularly around the pathological area for 10 minutes (10t2) or 15 minutes

(15t3). Treatment period is 10 - 12 procedures. For each patient the mode and time of the treatment procedure are selected individually depending on the patient's state of health.

Before the procedure, the place of injury is recommended to be massaged slightly with non-steroidal anti-inflammatory therapeutic agent

PMT methods for closed fractures treatment

Treatment starts at the 3-4 days after the fracture proved with X-ray data and specialized medical care (split, plaster dressing, limb’s immobilization). The patient should be in lying position, 1.0 mode of the 1range. The inductor is placed over the region of the fracture and moved around the perimeter of the limb over the pathological area after 2 pulsings of the magnetic field. Treatment period is 10 procedures, the duration of the procedure is 10 minutes (10t2).

12.7. Inflammatory and dystrophic changes in the skin after surgical and radiation therapy

Magnetic pulsed therapy can strengthen blood flow in the affected tissues and improve tissue regeneration processes within the area of surgical operation.

Indications for PMT

1. Postoperative scars which heal slowly.
2. Skin after a bad transplant.

Contraindications for PMT

Pyoinflammatory process in the area of surgical operation.

PMT methods

The patient's position for treatment depends on the problem localization. The treatment is carried out in contact with the area of postoperative scar or transplanted skin. If contact treatment is impossible, the pulsed magnetic effect is allowed through a gauze pad. A wound is required to be treated with disinfectants.

The treatment starts immediately after surgery. Mode of operation is 1.0 of the 1range, exposure time is 10 minutes (10t2). The number of sessions is 10 - 12.

12.8. Trophic ulcers of the lower extremities

The pulsed magnetic treatment removes a pain syndrome, reduces edema,

improves microcirculation in the area of ulcers and surrounding tissues and leads to ulcer healing.

Indications for PMT

1. Varicose ulcers of the lower limbs (check blood sugar).
2. Visible atrophic changes on the skin of the legs.

Contraindications for PMT

Practically none.

PMT methods

The patient is in lying position. Treatment is carried out in 0.6 mode of the 1 range. After three sessions, the mode is 0.8 of the 1 range, after the next three sessions – 1.2 mode of the 1range. Procedure time is 10 minutes (10t2). Treatment period is 10 – 12 procedures. Magnetic effect is carried out in contact with the tissue surrounding the ulcer, and the ulcer itself is affected with the inductor at the closest distance.

12.9 Chronic prostatitis

Indications for PMT

1. Acute nonspecific prostatitis.
2. Chronic prostatitis.

Contraindications for PMT

1. Specific prostatitis.
2. Abscess of the prostate gland.
3. Malignant tumors of the prostate gland.

PMT methods

The patient is in a lying position on his back with bent knees and lowered limbs moved apart. Pulsed magnetic field effect is carried out in contact in the 1.2 mode of the 1range. Procedure time is 15 min (10t2). The treatment period is 15-20 procedures. Refresher course of treatment, if it’s necessary, is prescribed after 1-2 months.

12.10.Diseases of ENT organs

Unlike fields with high frequency, this procedure does not produce thermal effects and does not lead to a decrease in pressure. So the indications for its application are considerably expanded. The magnetotherapy has an analgesic effect and treats

inflammations successfully, which is very important for any pathologies of ENT organs. The procedure has a calming effect and reduces blood coagulation. It can be prescribed for acute and chronic processes .

Indications for PMT

1. Anthritis;
2. Frontitis;
3. Pharyngitis;
4. Otitis;
5. Rhinitis
6. Laryngitis;
7. Tracheitis.

Contraindications for PMT

1. Cancer pathology;
2. Blood diseases - in particular, low coagulation;
3. Complex pathologies of the heart and blood vessels;
4. Application of the pacemaker;
5. High temperature;
6. Acute infections;
7. Individual intolerance;
8. Pregnancy.

PMT methods

The patient is in lying or sitting position. If it’s necessary, use a flexible holder with attached inductor No 2. The mode of operation (20 ÷ 60 mT) is determined by the form and stage of the disease and effect localization. Procedure time is 15 min (15t2). Treatment period is 15 – 20 procedures.

12.11. Stomatology

The apparatus's effect leads to stopping the inflammatory process, improving the blood microcirculation in the gums and close tissues, normalizing the metabolism and regenerating damaged tissues. Taking medicine can increase the treatment effectiveness. In all cases, careful care of the oral cavity is extremely important.

Indications for PMT

1. Gingivitis;
2. Periodontitis;
3. Parodontosis.

Contraindications for PMT

1. Blood diseases - in particular, low coagulation;
2. Complex pathologies of the heart and blood vessels;
3. High temperature;
4. Acute infections;
5. Individual intolerance;
6. Pregnancy.

PMT methods

The patient is in lying or sitting position. The inductor is fixed by a flexible holder with attached No 2 inductor or moved slowly around the upper and lower jaw on the right and on the left side of the face. The operating mode (40 ÷ 120 mT) of the 2 range is determined by the form and stage of the disease and effect localization. Procedure time is 15 min (15t2). Treatment period is 15 - 20 procedures.

12.12.Ophthalmology

Magnetic fields increase the microcirculation and reactivity of the eye's vessels. The magnetic field effect results in eye's vessels elasticity and tone normalization, capillaries diameter increase, higher blood flow. As a whole metabolic processes in tissues are activated.

Indications for PMT

1. Intraocular hemorrhages (hyphema, hemophtalm, iridocyclitis, postoperative cornea edema);
2. Vascular eyes diseases (blockage of the retina central vein and its branches, chorioretinal atrophy);
3. Keratitis, uveitis;
4. Eyes diseases with edema, inflammation;
5. Amblyopia of any etiology;

6. Spasm of accommodation.

Contraindications for PMT

1. Acute myocardial infarction;
2. Stroke;
3. Hypotonia;
4. Infectious diseases;
5. Individual intolerance;
6. Fever of unclear etiology.
7. Oncological disease.

PMT methods

The patient is in lying or sitting position. The inductor is fixed by a flexible holder with attached No 2 inductor or moved slowly around the eye's area. The operating mode (40 ÷ 120 mT) of the 2 range is determined by the form and stage of the disease and effect localization. Procedure time is 15 min (15t2). Treatment period is 15 - 20 procedures.

12.13.Cosmetological physiotherapy

Indications for PMT

1. Cellulite at any stage.
2. Aging skin.
3. Insufficient blood circulation.
4. Correction of the body shape.
5. Colloidal scars.
6. Edema on the face.

Contraindications for PMT

1. Pregnant women.
2. Older people.
3. People with problems in the cardiovascular system.

PMT methods

The patient's position depends on the process localization. The treatment is carried out in contact. The mode of operation is 0.8 ÷ 1.2, in contact. Procedure time is 10 min

(10t2). The method of PMT can be combined with traditional methods of treating this disease (antibiotics, massage, diet, etc.).

13. MARKING AND SEALING

13.1 The apparatus's front panel places a marking in the form of a symbol.

13.2 The apparatus's back panel places the following marking:

- the name of the manufacturer;
- the number of the apparatus according to the manufacturer's numbering system;
- the apparatus protection class according to the State Standard 3798-98;
- the protection type according to the State Standard 3798-98;
- rated voltage of mains;
- rated frequency of mains;
- power consumption at nominal operation mode;
- allowed fuse current;
- year of apparatus manufacture;
- technical specifications 32.50.50 - 05385631 - 2017.

13.3 The apparatus is sealed with No 1 mastic in the State Standard 18680.

Place of sealing: one seal in the place of fixing the bottom cover of the case.

14. WARRANTY

14.1 The manufacturer guarantees the apparatus meets all requirements of the technical specifications 32.50.50 - 05385631 - 2017 if the user keeps all operating conditions.

14.2 Warranty period is 12 months from the date of putting the apparatus into operation. The date of putting the apparatus into operation is the date of apparatus shipment to the buyer.

14.3 The warranty period is extended from the time the complaint was filed to the time when the apparatus was put into service by the manufacturer or repair organization.

14.4. The manufacturer undertakes, during the warranty period, to repair the apparatus free of charge until it is replaced as a whole, if during this period the apparatus fails or the indicators specified in this application manual become worse.

14.5 Free repair of the apparatus is carried out if the operating rules are met by the customer. Warranty obligations do not apply to the apparatus if there is any mechanical damage on its housing, inductor housing or control buttons.

15. APPROVAL CERTIFICATE

Pulsed magnetic medical apparatus "MILA-1" factory number _____
Meets technical specifications 32.50.50 - 05385631 - 2017 and is recognized as suitable for operation.
Date of manufacture _____ 201 _____
Personal signatures of persons,

/Place for seal/
responsible for accepting _____

16. INFORMATION ABOUT RECLAMATION

If the apparatus does not work or indicators readings do not meet those in the application manual, but the customer meets the requirements in the section "Warranty", the customer draws up the complaint in accordance with the procedure and sends it to the poste address:
PE "KVID-TV", vul. I. Mazepa, 34/47, kv.1, Kremenchuk, Ukraine, 39600.
If repair is required, the apparatus and statement should be sent to the address: vul. I. Mazepa, 34/47, kv.1, Kremenchuk, Ukraine, 39600.
Tel. / Fax (097) 079-47-62.
E-mail: sfkvid@gmail.com

17. DATA ON REPAIR

Repair of pulsed magnetic medical apparatus "MILA-1" factory number _____
is made on _____.
The technical characteristics of the apparatus are checked after repair.

Name and signature of the person responsible for the repair