

USING THE METHODS OF PHYSICAL THERAPY IN CHILDREN WITH THE VEGETOVASCULAR DYSTONIAS

AA Shapovalova

Odessa National Medical University, Odessa, Ukraine

Number of characters: 10 000 (with abstracts and summaries). Number of graphics: 0 x 1 000 characters (lump sum)=0 characters.
Total: Number of characters: 10 000 (with abstracts, summaries and graphics)=0,25 spreadsheets publishing.

Key words: physical therapy, children, vegetovascular dystonias.

Summary

The aim of rehabilitation may be: the restoration of the anatomical structure of the damaged tissues and organs, restoration of the dysfunctions, development of the compensatory possibilities, normalization of psycho-emotional disorders.

Principles of medical rehabilitation in pediatrics: the use of modern achievements of the medical science and technology, systematic character, sequence and staging character of rehabilitation (hospital, sanatorium and dispensary- polyclinic stages), accountability of the influence of growth and development of organism on the dynamics of the pathologic processes, complexity of the methods (physio-, kinesi-, psycho-, diet, manual and pharmacotherapy, massage and others), combination of rehabilitation with teaching, the active participation of parents in rehabilitation, its completeness (reaching of the maximum result), use of the supporting therapy.

Modern methods of rehabilitation of children with the vegetovascular dystonias:

a) by the hypertensive type:

- endonasal electrophoresis with a mixture of Ca –Mg (2% solution, 10 min, daily or in a day, №8-10);
- electrophoresis with Mg (2% solution MgSO₄, the currents of apparatuses Amplipulse on the collar zone, 10-15 min, in a day, №8- 10);
- general franklinization (10-15 min, in a day, №7-8);
- electric sleep at the low frequencies (5-10-15 Hz, 30-40 min, in a day, №8-10);
- oxygen baths (36-37°C, 10-15 min daily or in a day №8-10);
- iodine-bromine baths (36-37°C, 10-15 min, daily or in a day, №8-10);
- sea bathings in the not cold water (t° is above 21 -22°C);
- baths with the sea water (36-37°C, 10-15 min, daily or in a day, №8-10);

b) by the hypotensive type:

- electric sleep (20-40 Hz, 30-40 min, daily or in a day, №8-10);
- electrophoresis with Ca on the collar zone (8-15 min, daily or in a day, №8-10);
- massage of the spine and collar zone (energetic);
- carbonate or pearl baths (35-36°C, 5-10 min, daily or in a day, №8-10);
- circular douche with water of indifferent or cool temperature (35-36°C, 5-6 min, daily or in a day);
- sea bathings in the cool water (t° is higher than 18-20°C);
- cool douches and rubdown (28-32°C, 5-10 min, daily or in a day, №8-10);

- electrophoresis with 0.5% solution of Mezaton to the children of school age, employing the collar procedure (5-10 min, № 6-8 in the presence of the physiotherapist).

Indications to the application of INFEMF (impulse low frequency electromagnetic field)

1. Vegetative dysfunctions of permanent course in initial vagotonia, sympathicotonia or eutonia, beginning from the age of 3.
2. Vegetative dysfunctions in combination with neurosis-like syndromes.
3. Vegetative dysfunctions against the background of somatic pathology, which is accompanied by the weakly expressed pain syndrome (diseases of loco-motor apparatus, gastrointestinal tract and others).
4. The most effective INFEMF is in the children of the younger age (7-11 years old) in reduction of protective- adaptive compensating mechanisms.

The advantages of INFEMF in children and adolescents with VD (vegetative dysfunction) are: good tolerance of the procedures by all patients; simplicity and convenience in carrying out the procedure (distance influence); universality and possible range width of the influence; the possibility of integration and association with other methods of rehabilitation treatment and application for prevention.

Contraindications to the application of INFEMF

1. Age up to 3 years.
2. Paroxysmal course of the vegetative dysfunctions with frequent vegetative crises, expressed orthostatic hypotension, syncope in anamnesis.
3. Vegetative dysfunctions in the period of exacerbation.
4. Vegetative dysfunctions against the background of the severe disturbance of the central nervous system of traumatic, infectious-allergic nature with presence of the convulsive of syndrome in anamnesis.
5. Exacerbation and acute course of the chronic disease, which requires adequate drug (or surgical) treatment.
6. Diseases of the eyes.

The aim of rehabilitation may be: the restoration of the anatomical structure of the damaged tissues and organs, restoration of the dysfunctions, development of the compensatory possibilities, normalization of psycho-emotional disorders.

Principles of medical rehabilitation in pediatrics: the use of modern achievements of the medical science and technology, systematic character, sequence and staging character of rehabilitation (hospital, sanatorium and dispensary- polyclinic stages), accountability of the influence of growth and development of organism on the dynamics of the pathologic processes, complexity of the methods (physio-, kinesi-, psycho-, diet, manual and pharmacotherapy, massage and others), combination of rehabilitation with teaching, the active participation of parents in rehabilitation, its completeness (reaching of the maximum result), use of the supporting therapy.

Modern methods of rehabilitation of children with the vegetovascular dystonias:

a) by the hypertensive type:

- endonasal electrophoresis with a mixture of Ca –Mg (2% solution, 10 min, daily or in a day, №8-10);

- electrophoresis with Mg (2% solution MgSO₄, the currents of apparatuses Amplipulse on the collar zone, 10-15 min, in a day, №8- 10);

- general franklinization (10-15 min, in a day, №7-8);

- electric sleep at the low frequencies (5-10-15 Hz, 30-40 min, in a day, №8-10);

- oxygen baths (36-37°C, 10-15 min daily or in a day №8-10);

- iodine-bromine baths (36-37°C, 10-15 min, daily or in a day, №8-10);

- sea bathings in the not cold water (t° is above 21 -22°C);

- baths with the sea water (36-37°C, 10-15 min, daily or in a day, №8-10);

b) by the hypotensive type:

- electric sleep (20-40 Hz, 30-40 min, daily or in a day, №8-10);

- electrophoresis with Ca on the collar zone (8-15 min, daily or in a day, №8-10);

- massage of the spine and collar zone (energetic);

- carbonate or pearl baths (35-36°C, 5-10 min, daily or in a day, №8-10);

- circular douche with water of indifferent or cool temperature (35-36°C, 5-6 min, daily or in a day);

- sea bathings in the cool water (t° is higher than 18-20°C);

- cool douches and rubdown (28-32°C, 5-10 min, daily or in a day, №8-10);

- electrophoresis with 0.5% solution of Mezaton to the children of school age, employing the collar procedure (5-10 min, № 6-8 in the presence of the physiotherapist).

To give the Infita- therapy the apparatus “INFITA” was used intended for the influence of pulse low frequency electromagnetic field (ILFEMF) in the frequency range of 10-80 Hz on the central nervous system without the direct contact with a patient. The patient was in the sitting position, at rest and was looking at the mirror screen of the emitter (the distance between the patient’s face and the screen was 20-25 cm). The influence of ILFEMF was exerted through the visual organ in the highest regulatory centers of the brain. In sympathicotonia there were consecutively used frequencies from 10 to 60 Hz (the 1st and 2nd day - 10-20-30 Hz with the exposure of 2 min on each frequency; the 3rd and 4th day - 30-40-52 Hz – by 3 min on each frequency; the 5th, 6th and 7th day - 52-57-60 Hz - by 4 min on each frequency, and beginning from the 8th day to the end of the course treatment – by 5 min on each frequency). In vagotonia there were consecutively used frequencies from 40 to 80 Hz (the 1st and 2nd day - 40-52-57 Hz by 2 min on each frequency; the 3rd and 4th day - 57-60-64 Hz – by 3 min on each frequency; 5, 6 and 7 day - 64-70-80 Hz - on 4 min on each frequency, and beginning from the 8th day to the end of the course treatment - by 5 min on each frequency). Procedures of INFEMF were carried out in a day (in the days free from balneotherapy), with 10 procedures for the course.

Indications to the application of INFEMF (impulse low frequency electromagnetic field)

1. Vegetative dysfunctions of permanent course in initial vagotonia, sympathicotonia or eutonia, beginning from the age of 3.

2. Vegetative dysfunctions in combination with neurosis-like syndromes.

3. Vegetative dysfunctions against the background of somatic pathology, which is accompanied by the weakly expressed pain syndrome (diseases of loco-motor apparatus, gastrointestinal tract and others).

4. The most effective INFEMF is in the children of the younger age (7-11 years old) in reduction of protective- adaptive compensating mechanisms.

The advantages of INFEMF in children and adolescents with VD (vegetative dysfunction) are: good tolerance of the procedures by all patients; simplicity and convenience in carrying out the procedure (distance influence); universality and possible range width of the influence; the

possibility of integration and association with other methods of rehabilitation treatment and application for prevention.

Contraindications to the application of INFEMF

1. Age up to 3 years.
2. Paroxysmal course of the vegetative dysfunctions with frequent vegetative crises, expressed orthostatic hypotension, syncope in anamnesis.
3. Vegetative dysfunctions in the period of exacerbation.
4. Vegetative dysfunctions against the background of the severe disturbance of the central nervous system of traumatic, infectious-allergic nature with presence of the convulsive of syndrome in anamnesis.
5. Exacerbation and acute course of the chronic disease, which requires adequate drug (or surgical) treatment.
6. Diseases of the eyes.