

MAGNETIC-INFRARED LASER THERAPY OF ARTERIAL HYPERTENSION: CLINICAL VALIDATION

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Arterial hypertension is one of the most common cardiovascular diseases and a growing problem in countries with transitional economies, the 1994 report of the World Health Organization Expert Committee said.

Arterial hypertension remains a problem in Russia too. Control of hypertension is difficult and ideally should consist of early identification, primary prevention and adequate treatment. While one could rely on propaganda of a healthy lifestyle and high technology care at a national level, there is the need for accurate diagnosis and rational use of medical and nonmedical interventions individually.

Medical treatment of arterial hypertension has been worked up well and is no subject of this report. Diuretics, beta and alpha blockers, angiotensin-converting enzyme inhibitor and calcium antagonists in fact make up the available drug arsenal for arterial hypertension.

Traditionally recommended nonmedical methods comprise weight reduction, a higher potassium and a lower salt and animal fat intake, refusal of smoking.

Magnetic-infrared laser (MIL) therapy using a MILTA therapeutic device offers a unique nonmedical intervention which also provides for prevention of arterial hypertension. Low-intensive laser radiation combined with other treatments improves microcirculation, oxygen transport and utilization, and has anticholesterolemic, antiinflammatory and other effects, all ameliorating progress of arterial hypertension.

However, available guidelines for MIL therapy cannot be uniformly effective, as they do not cover the ethiopathogenic diversity of the arterial hypertension syndrome.

Indeed, MIL irradiation of the internal carotid artery area can be effective only in "neck migraine" or fibromyalgia which it in fact represents.

When the cause is located in cervical segments, i.e. in the presence of the spinal artery syndrome, MIL therapy without manual therapy or other interventions proves useless. To make MIL therapy of arterial hypertension adequate, its etiology should be looked for in the available classification. This working classification well fits into the MIL methodology.

Causes of arterial hypertension remain obscure in over 95 percent of patients, a situation referred to as primary or essential hypertension.

Gender, ethnic, socioeconomic, genetic, dietary and diencephalic determinants, alcohol abuse, smoking and adynamia provide some explanation for vulnerability to hypertension, with roles of organ systems remaining uncertain.

In this case, MIL therapy is appropriate with a somatic stimulation rationale which has three components.

The first is irradiation of the heart from all available positions, not only of the apical beat area.

The second component is irradiation of blood, preferably of carotid arteries, when cerebral circulatory disorders are present. In the absence of cerebrovascular flow disorders, any projection of major blood vessels can be treated with MIL.

The third component, which prevails in older individuals with signs of atherosclerosis, is irradiation of frontal, temporal and occipital areas. Cerebral circulatory improvement after head irradiation alone has been reported in 42 to 57 percent of patients (Filina, 1994).

Another component of somatic treatment is irradiation of the renal-adrenal area, where MIL therapy improves the parenchymal and tubular blood supply, mineralocorticoid and glucocorticoid production and renin-mediated mechanisms, and reduces the angiotensin-converting enzyme synthesis.

Suspected impairment of spinal arterial circulation warrants the addition of sparing manual maneuvers such as Levit postisometric relaxation.

Populational studies suggest that the diagnosis of secondary hypertension, i.e. etiology, is obtainable in only 1.1 percent of cases.

Groups of etiologies need analysis for possibility of using MIL therapy. The WHO classification cites seven such groups.

The first is drugs and exogenous agents. Hence, care consists of their identification, drug withdrawal and detoxication. MIL therapy is possible for general stimulation limited to the guidelines mentioned above. Blood and kidney irradiation can prove sufficient in most cases.

The second group is renal diseases. MIL therapy should follow available guidelines which will not be commented here.

The third group is endocrine diseases. This area remains problematic for MIL therapy and awaits endocrine studies. Somatic stimulation is unlikely to do harm here, with the provision that caveats like malignant pituitary diseases or adrenal diseases are not overlooked. Only an endocrinologist appears to be in position to decide on MIL therapy in the presence of endocrine causes of arterial hypertension.

The fourth cause is coarctation of the aorta or aortitis. Arm and leg arterial blood pressure measurement is a basic requirement for identifying this cause. Needless to say, coarctation is unmanageable by MIL therapy.

The fifth determinant is complications of pregnancy and the sixth is neural diseases comprising brain tumors, porphyria, encephalitis, lead intoxication etc. It should be stated that even though MIL therapy can be employed in combination with other therapies (e.g. for blood irradiation), only a specialist such as a gynecologist or a neurologist can use it right.

The seventh entry in the classification is complications of surgery. Whatever an extent of or a reason for surgery, anything more than somatic effect of MIL therapy is not expectable here.

CONCLUSIONS

Magnetic-infrared laser therapy is often contraindicated in secondary arterial hypertension. When indicated, uses of MIL therapy are limited (blood or kidney irradiation). Decisions on MIL therapy should be made by specialists.

It should be remembered that what presents as primary hypertension can be secondary to an unidentifiable cause. If primary hypertension is certain, a pathogenetic intervention for it is somatic MIL therapy used alone or in combination with medical and nonmedical treatment.

When neck migraine and other vertebral disorders are suspected, MIL therapy should be combined with manual postisometric relaxation. Isolated MIL treatment of cervical vertebrae is ineffective. MIL treatment offers a pathogenetic and effective method of arterial hypertension prevention.