

Laser biostimulation in the treatment of pleurisy

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INTRODUCTION:

Low-intensity lasers have been utilized in medicine in two ways: for local stimulation and for stimulation of acupuncture points. Literature data reveal that this method has been indiscriminately applied in psychiatry, rheumatology, gynecology, dermatology, otorhinolaryngology, in diverse acute and chronic pains, inflammations, vascular disorders, angina pectoris, bronchial asthma. Most commonly reported clinical effects are analgesia, spasmolytic and anti-inflammatory effects, as well as faster wound and bone healing.

MATERIAL AND METHODS:

This prospective study analyses effects of laser biostimulation on patients with pleurisy. The analysis included 25 patients treated at the Institute of Lung Diseases in Sremska Kamenica during 2000, 2001 and 2002. Apart from conservative treatment, these patients were treated with laser biostimulation of acupuncture points and local region for ten days. During treatment, changes of present clinical signs, general symptoms, radiological findings, as well as changes of some relevant biochemical parameters were recorded.

RESULTS:

Results were compared with the control group which included the same number of patients, who differed from the examined group only by not being exposed to laser biostimulation. The examined group of patients with pleuritis presented with quicker resorption of pleural effusion, less pleural adhesions, more significant decrease of clinical symptoms, especially pain, as well as more significant increase of cortisol and immunoglobulin A decrease of circulating immune complexes (CIC), leukocytes and sedimentation rate than the control group.

DISCUSSION:

Mechanisms of laser biostimulation in treatment of pleurisy were described in detail and the obtained results were correlated to those reported by other authors.

CONCLUSION:

1. Patients with pleurisy undergoing laser stimulation presented with faster resorption of effusion and remission of the subjective symptoms, as well as significant decrease of biochemical acute inflammation parameters in the peripheral blood and therefore with faster recovery.
2. In patients with pleurisy laser treatment increases regenerative mechanisms of the pleural surface, thus decreasing the quantity of formed adhesions and resulting in better mobility of the diaphragm.

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