

раторного оборудования. Следует отметить тот факт, что развитие информационных, в том числе мультимедийных технологий в образовании, существенно опережает оснащенность оборудования и приборов, необходимую для взаимодействия с этими технологиями. На наш взгляд возникает опасность перехода к чисто виртуальному общению сту-

дентов с техническими устройствами с которыми им предстоит оперировать в дальнейшей реальной практической деятельности. Такое положение очевидно связано с недостатком соответствующей техники, поэтому необходимо разрабатывать современные приборы и оборудование с учетом требований научно-технического прогресса.

Медицинские технологии

New method for treatment of multiple-destructive pulmonary tuberculosis.

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Introduction: The treatment of multiple-destructive pulmonary tuberculosis is extremely complicated, and remains a neglected problem in current medicine. We possess no information to date on any targeted chemotherapy regimens to fit this patient category.

Objective: The study was aimed at developing integrated treatment method for disseminated pulmonary tuberculosis with multiple lesions. We used infrared laser irradiation for intercostal deep photophoresis of isoniazid and a combination of aboriginal medicinal herbs along with conventional tuberculostatic agents.

Study methods and clinical observation: The study comprised 79 young and middle-aged patients with disseminated multiple-cavernous pulmonary tuberculous infiltration, suffering marked pneumofibrosis, chronic bronchitis and excess mycobacterial production. There were 47 patients in the main study group, while 32 patients in control group underwent conventional chemotherapy course. Hourly assessment of isoniazid concentration in plasma and spectrophotometry to determine alpha-tocopherol and malonic dialdehyde level in blood were performed in 30 patients. All the patients underwent laboratory, radiological, bacteriological and bronchological examination.

Results and discussion: In 1-4 mo. sputum smears conversed in 84.1% of patients receiving laser-phytotherapy with deep isoniazid photophoresis, exceeding by 5-fold the rates in control group at the time (16%). Total rates of bacterial isolation cease in both groups counted 97.7% and 68% respectively with mean time of 2.3 mo. in the main group vs. 5.2 mo. in control group. 2.9 mo. earlier sputum conversion was a clear pro for higher clinical utility of the proposed method.

Integrated co-operation between the treatment components was evidenced by significantly increased rates of cavities cure: 89.4% of cases cured, with 2.4 mo. shorter period compared to lower results in control group. In all cases with purulent and catarrhal endobronchitis recovery was determined basing on results of bronchological examination.

Conclusion: Increased targeted tissue microcirculation under the shock-wave action of local laser irradiation was the key mechanism responsible for thera-

peutic effect of laser therapy in multiple-destructive pulmonary tuberculosis. Shock-wave mode of exposure allowed the solution of isoniazid, introduced via intercostal and intramuscular way, penetrate into lung tissue through fibrotic changes. This was evidenced by low isoniazid level in plasma, indicating that the drug depot had formed in the lungs. Significant positive shift in alpha-tocopherol rates and reduced malonic dialdehyde levels, along with normalized cellular and humoral immunity parameters proved high efficacy of the proposed method.

Successful treatment outcomes could be achieved due to the fact, that phytotherapy potentiated the integral action of intact isoniazid molecules delivered by local laser impulse directly to damaged areas. Targeted pharmacokinetic effect of isoniazid introduced via intercostal way was due to infrared laser irradiation - induced capability to penetrate to deep tissue layers. Homeostasis of inner organs has been maintained. Clinical dynamics revealed no episodes of hepatotoxic, neurotoxic or allergic effects. Prolonged exposure to laser and phytotherapy did not attenuated antioxidant system, on the contrary, twice increased alpha-tocopherol level in blood indicated activation of antioxidant system in the observed patient population. The treatment method has been licensed by patent 2204408 C2 (Russian Federation, May 20, 2003).

It is admitted that alternative method of isoniazid administration in combination with adjuvant infrared laser and phytotherapy marked a new status of chemotherapy in the North, which aims at pharmacokinetic host protection from the drug side effects, especially in pulmonary tuberculosis patients with liver/stomach/kidney diseases.

Некоторые аспекты действия бактериального лектина на фагоцитирующие макрофаги мышей

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Лектины отличаются своим повсеместным распространением в природе, их находят у бактерий, растений, беспозвоночных и позвоночных животных. Согласно распространенному определению лектины – группа белков не иммунного происхождения, обладающих общим свойством обратимо и