

SAM4-1

Antimicrobial photodynamic therapy (APDT) in treatment of a tuberculosis.

The first clinical results

Nick Vasiliev

Siberian center of laser medicine, Novosibirsk city, Russian Federation

The poor efficacy of treatment of a tuberculosis, especially of multidrug-resistant forms is known. The method of a photodynamic therapy is used for rising efficacy of complex treatment we in flow at 5 years, utilizing following principles: 1) APDT for treatment of a tuberculosis is local and high-dose PDT; 2) the photosensitizer for APDT of a tuberculosis should have a high quantum yield of a ROS-generation; 3) If there is the cavern in lung formed, the transthoracic puncture under X-ray control for delivery of a photosensitizer and light we applied; 3) for infiltration forms of a tuberculosis the injection of a photosensitizer and light delivery through fiberoptic bronchoscope we applied; 5) procedure is repeated from 3 up to 7 times.

Results of APDT-application is the prompt clearing of a tubercular cavern and drop of fastness of mycobacteria to antibiotics. The transformation of the open forms (MBT+) of a tuberculosis to enclosed forms (MBT-) is marked in 74 % of cases, as contrasted to 43 % in control group of a patients, receiving only conventional therapy in flow 6 months of treatment at the drug resistant forms of a tuberculosis.