in addition to the basic course of TB treatment, were treated through the bronchoscope. The second group consisted of 10 patients who received only basic TB treatment. Bronchoscopy performed endoscope company «Pentax» Japanese production, under local anesthesia. Treatment through the bronchoscope included only 10 manipulations performed twice a week. All patients prior to the course conducted X-ray examination, and sputum microscopy to identify MBT. It should be noted that all patients recovered MBT. During bronchoscopy drainage lumen bronchial anti-TB drugs were introduced such as isoniasid, ethambutol, amikacin. Drugs used in combination isoniasid+1.

Results. By the end of treatment through the bronchoscope all patients in both groups were re-exposed to X-ray examination. In addition, underwent repeat sputum microscopy to identify the MBT. As a result, the surveys revealed that all 15 patients in the first group by the end of the five-week course of treatment through the bronchoscope was a positive dynamics of X-ray. So, there was a significant resorption fibrosis, closing the cavity decay in 13 patients. 2 patient was observed resorption of fibrosis and a significant reduction in the size of the cavity decay. All five patients in the first group showed abacillation. As for the second group of patients, it should be noted that only 4 patients had minor radiographic positive dynamics. The remaining 6 patients no positive radiological improvement was observed. Total in 3 patients of the second group was observed abacillation.

Conclusion. Thus, this study proved the efficacy of endobronchial administration of TB drugs in the treatment of destructive forms of pulmonary tuberculosis. Treatment through the bronchoscope significantly shortens the total basic anti-TB therapy and increase its effectiveness.

## Эндобронхиально-эндокавитарное введение противотуберкулезных препаратов в терапию деструктивньх форм туберкулеза легких у беженцев, больных сахарным диабетом и гепатитом C

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$\Pi$редметом данного исследования являлось изучение эффективности эндобронхиально-эндокавитарного введения противотуберкулезных препаратов при деструктивных формах туберкулеза легких у беженце, больных сахарным диабетом и гепатитом C, в условиях города Губы Азербайджана.

Изучены результаты лечения 25 больных, условно разделенных на две группы. В первую группу включены 15 больных, которые наряду с базовой противотуберкулезной терапией проходили курс лечения через бронхоскоп. Вторую группу составили 10 больных, получавших только базовый противотуберкулезный курс лечения.

К концу 5 -недельного курса лечения получены результаты, представленные вашему вниманию.

# Compliance in HIV-associated tuberculosis patients 

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Anew compliance test has been examined in two similar groups of pulmonary tuberculosis cases, including a group with 35 HIV-associated persons. More effective treatment has been proved in the cases of both group with higher compliance.
Introduction. The failure to take prescribed medication is a universal perplexing phenomenon. This fact must be taken into consideration when one endeavours to treat a patient or control diseases in a community. TB is a communicable disease requiring prolonged treatment, and poor adherence to a prescribed treatment increases the risk of morbidity, mortality and spread of disease in the community. Original compliance test has been created with the aim of tuberculosis current predicting. However, its efficacy has not been established in the cases with HIV-associated pulmonary tuberculosis.

Material and methods. This non-randomized controlled trial was conducted on seventy patients ( 45 male and 25 female, in the age from 25 to 65 years old) with different forms of pulmonary TB. Fifty two patients had lung cavities and isolated sensitive to antibiotics causative agent. All cases were devided in two similar groups. 35 cases in the base group suffered from HIV-associated pulmonary tuberculosis and received antiretroviral treatment. Antituberculous regimens were given in both groups under direct observation as recommended by WHO. All cases were examined with the help of the own compliance test before and after 3 monthes of clinical observation.

Results. Descriptive statistics showed that the best curable effect was in four and five cases of both groups with an initial high level of compliance ( $8-10$ stens). Two and three patients of both groups with low complience ( $1-2$ stens) interrupted treatment and were discharged because of bad behavior. The rest patients had approximately the same results independently the group. In the multivariate logistic regression analysis, factors that remained independently associated with non-compliance were: employment, living status, family support, stigma, and patients' knowledge of TB. In addition to some labile factors influenced on compliance have been found. Such as inadequate coping strategy, stress, frustration, addiction to alcohol, which depended on a stage of tuberculosis, personality and quality of psychological support.

Discussion. Results, imply existence of human resource gaps and TB staff should be adequately prepared to deal with complex issues of TB patients. This study suggests that correcting psychological status for TB patients may improve compliance rates. This may be achieved by expansion of psychological help to patients.

Conclusion. The study showed that a low compliance predicted the therapy failure in the patients with and without HIV-associated tuberculosis. Cure efficacy depended on compliance level that should be taken into consideration in the treatment of patients.

## Комплайенс у ВИЧ-инфицированных больных туберкулезом

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Hовый способ оценки комплайенса апробирован в двух идентичных группах больных туберкулезом легких, включая группу из 35 ВИЧ-инфицированных. Более эффективным оказалось лечение больных обеих групп с более высоким комплайенсом.

# Some peculiarities of X-ray picture in the HIV-associated tuberculosis patients 

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mall pulmonary disintegration develops often at the beginning of tuberculous disease, but is not seen on routine tomography. Cavity detecting is an important problem for HIV-associated TB diagnosis because its significance of pulmonary TB transmission.

Material and methods. The aim of this study is to assess connection between inflammatory «path» and scattering foci and cavity in HIV-associated TB. This randomized controlled trial was conducted on seventy tuberculosis patients. All of them ( 45 male and 25 female, in the age from 25 to 65 years old) were divided in two similar groups. 35 cases of the base group suffered from HIV-associated pulmonary tuberculosis with quantity of СД4+ about $320 \cdot 10^{6} / \mathrm{l}$. A rest was a control group. The cases were X-ray examined with the help of routine technique and computer tomography.

Results. Descriptive statistics showed that small cavities in the cases of the base group were recognized in 28 persons ( $80.0 \%$ ), and in 24 persons of the 2-nd group ( $68.8 \%$; $\mathrm{p}>0.05$ ). The inflammatory path and neighbor foci have been recognised in 18 ( $68.8 \%$ ) persons of the cavitary cases of the base group and in the 12 persons ( $50.0 \%$ ) of the cavitary cases of the second group ( $\mathrm{p}<0.05$ ). In the multivariate logistic regression analysis, factors that associated with lung cavity in the HIV-associated TB cases were: big size, thin wall, caseous necrotic foci and pronounced infiltration with trend to hilum lymphadenopathy. Besides such clinical manifestations as asthenia, hectic temperature, weight loss occurred more frequently in the HIV-associated TB cases.

Discussion. Data from mice, rabbits and humans suggest a role for tissue-damaging enzymes released from macrophages and neutrophils and the inflammatory effects of tumour necrosis factor, interferon- $\gamma$, interleukin-4 (IL-4), and IL-12 in cavity formation. This afflux into the place of tuberculosis inflamation leads to inflammatory tract and bronchial rupture to focie scattering in the lung. These changes can be more pronounced in the HIV-associated tuberculosis patient because of granulomas formation depression.

Conclusion. Inflammatory path and neighber focie syndrom is an indirect proof of an early stage of cavitation and can be recognized more often in the HIV-associated tuberculosis patients that should be taken into consideration filling in the gaps in our knowledge of cavitary tuberculosis disease.

## Некоторые особенности рентгенологической картины ВИЧ-инфицированных больных туберкулезом <br> С.Н. Новикова, Ю.И. Шахова, Ю.И. Лебедев, Н.В. Рублева <br> Курский государственный медицинский университет, Курск, РФ

Pентгенологический синдром, состоящий из воспалительной «дорожки» и очагов в соседних сегментах, обнаруживали чаще у 35 ВИЧ-инфицированных больных легочным туберкулезом по сравнению с аналогичной группой больных туберкулезом легких. ■

