EFFICIENCY OF THE CLINICAL FOLLOW-UP OF TUBERCULAR PATIENTS IN AN UNFAVOURABLE EPIDEMIOLOGICAL SITUATION

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Summary. One of the priority trends in the improvement of the epidemiological situation in our country is increasing the efficiency of treatment and clinical follow-up of tubercular patients. Efficiency analysis of the 6-year- clinical follow-up of tubercular patients showed a complex of medical and organizational shortcomings requiring emergency measures for their elimination.

Key words. Tuberculosis, efficiency of the clinical follow-up of tubercular patients, tuberculosis recurrence

Introduction. Decrease in the efficiency of the clinical follow-up and treatment of tubercular establishments contingents in the Irkutsk region was noted during an unfavorable epidemiological situation. Increase in the efficiency of the clinical follow-up of tubercular patients can be achieved by working out special purposeful measures based on knowledge of the present shortcomings in one or another kind of antitubercular aid to the population [2]. The work shortcomings are usually revealed by a direct check-up of all primary documents taken for tubercular patients and those of other groups of the clinical register, official registration forms, additional documents, interview with patients, etc. At the same time efficiency and quality of the clinical follow-up of tubercular patients can be assessed by a complex of statistical indices used in the analysis of work of the antitubercular establishments [1, 3].

Aim of study. To study the efficiency of the clinical follow-up of tubercular patients in an unfavorable epidemiological situation in the Irkutsk region.

Materials and methods. The figures of the official registration forms from the antitubercular establishments of the Irkutsk region during the period of 2005-2010 were used in the study.

Results and discussion. The dynamics of indices of tubercular morbidity, prevalence and mortality shows the maintaining strained epidemiological situation in the Irkutsk region during the whole analyzed period. Thus, tubercular morbidity increased by 20.3%, prevalence – by 11.6%, and mortality – by 22.1%. In 2010 the morbidity index comprised 147.3 per 100 thousand of people that tops the analogous index in the RF (77.4) by 47.5%, the prevalence index comprised 395.8 per 100 thousand of people (in the RF – 178.7) and the mortality index comprised 43.7 100 thousand of people (in the RF – 15.4).

Quality of the clinical work (diagnoses revision of tubercular patients, timeliness of their transfer from active groups to inactive ones, treatment efficiency, quality and timeliness of examination) can be judged by the index of the ratio of the number of registered patients at the end of the year over the number of patients registered for the first time.

The period of being registered depends on the localization of tubercular impairment. In this connection it is necessary to calculate the follow-up terms separately for the patients with the pulmonary and extrapulmonary tuberculosis. The dynamics of the duration index of the clinical follow-up of patients registered during the period of 2005-2010 including patients with tuberculosis in general and those with pulmonary (TP) and extrapulmonary tuberculosis (TEP) are shown in fig.1.

As shown in figure, the average period of the clinical follow-up of patients with TEP greatly decreased as compared with TP. Optimal value of the given index for the patients with TP comprises 3.0-3.5 years. The index exceeding shows a delay in being on the books of tubercular patients.

Authenticity of the duration index of the registered tubercular patients follow-up was assessed in comparison with the following indices: a) annual rate of decreasing of the number of

tubercular patients; b) clinical recovery; c) abacilliration of tubercular patients. A high level of both clinical recovery index and contingents abacilliration index and the rate of decrease in the number of tubercular patients should correspond to the real low index of duration of the registered tubercular patients follow-up. The optimal level of the annual rate of contingents decreasing showing a qualitative clinical work comprises 7.0-9.0%.

The average follow-up period tops the recommended terms of the clinical follow-up. Comparing with the given data we can affirm unauthenticity of the average period of follow-up of TP patients in 2006-2007 due to the decrease in the efficiency of treatment of tubercular patients and insufficient work on revision of the antitubercular establishments contingents.

Ensuring higher decreasing rates of tubercular contingents can be achieved by correct planning of the level of the clinical recovery and contingents abacilliration indices. When planning the transfer of patients from registration groups I and II to group III it is necessary to provide for the clinical recovery index to prevail the specific gravity of the first revealed patients with pulmonary tuberculosis among all patients with pulmonary tuberculosis no less than by 6.0-8.0%. The planned level of abacilliration index should prevail the specific gravity of the first revealed bacillary patients among all registered bacillary patients by 10.0-15.0%. Comparison of the planned and actual indices of clinical recovery and contingents abacilliration is presented in table 1.

Abacilliration index did not reach the planned figures for the whole analyzed period. Actual index of clinical recovery increased in 2008-2010 and prevailed the planned one.

Thus, prevailing of the average terms of clinical follow-up of tubercular patients shows a delay of patients on registration due to the decreased treatment efficiency, and the decrease is due to the increased index of clinical recovery in 2008-2010 and decreased TEP contingents.

The quality index of clinical work, validity of patients "movement" from one group to another and treatment efficiency is the index of tuberculosis recurrence rate in people cured of tuberculosis. This part of work can be analyzed by the calculation of some indices:

Index of tuberculous relapse rate in people cured of tuberculosis (per 100 thousand of people). On administrative areas with highly organized treatment and presence of documents of high quality at the moment of striking off the register the recurrence index should not exceed 5.0-6.0 per 100,000.

The early recurrence index allows to assess the nearest treatment results and validity of transfer of tubercular patients to registration group III.

The specific gravity of patients with recurrence among contingents ill with tuberculosis. On the territories with highly organized treatment the index should not exceed 1.5-2.0%.

The specific gravity of patients with tuberculosis reactivation among first revealed patients. Optimum level of this index should be 18.0-20.0% (tab.2).

As shown in table, recurrence rate indices in people cured of tuberculosis and those of early recurrence rate of TP exceed the optimum levels for the whole studied period that is the evidence of the following shortcomings: bad examination of patients when striking off the register, groundlessness of transfer of patients into inactive groups insufficient treatment efficiency. Quite small number of people with recurrence among the first revealed patients, when the number of admitted patients from other hospitals prevailed that of discharged patients, is the evidence of incorrect registration of patients with recurrence and groundless admitting them as arriving from other institutions.

Treatment efficiency of the first revealed patients (FRP) was assessed by the indices of bacterial discharge cessation and breakdown cavities closing dynamics of which is presented in fig.2.

According to the bacterial discharge criterion, treatment efficiency of first revealed patients decreased from 53.6% in 2000 to 52.6% in 2010 with the maximum values in 2005 and 2008, and according to the breakdown cavities closing criterion it increased from 43.8% to 45.1% respectively.

A definite influence upon the dynamics of FRP treatment efficiency indices is exerted by the efficiency of treatment of registered patients particularly the indices of clinical recovery and abacilliration (fig. 3).

As shown in figure, the indices had trend to the growth during the whole analyzed period. As compared with the FRP treatment efficiency the indices of people ill with tuberculosis greatly improved.

When assessing the treatment efficiency they use the indices of inclusion in the surgical treatment of TP patients and those with fibrous-cavernous tuberculosis. (FCT). The dynamics of the given indices is shown in fig.4.

Optimum criteria of activity in clinical patients recovery is the use of surgical treatment of PT patients in 10.0-15.0% and that of FCT patients in 10.0%. In accordance with the given recommendations, the range of surgical treatment of tubercular patients in the Irkutsk region for the whole period was insufficient. The work quality in the foci of tubercular infection was assessed by the following indices: the morbidity of people being in contact with tubercular patients per 1000,000 of the population, the morbidity of people being in contact with bacillary patients at an average annual number of registration group IV, the morbidity of people being in occupational contact at the number of registered people, number of people who fell ill due to the contacts among contingents and first revealed patients (tab.3).

Dynamics of the analyzed indices of work quality in the foci of tubercular infection shows its low effectiveness. However, it is necessary to note the improvement of the index of tuberculosis morbidity of people in occupational contact. Small range of hospitalization of FRP and contingents with bacterial discharge is due to the lack of in-patient fund. During 6 years the index of the ratio of clinically cured people over the dead from active tuberculosis reached its least level due to significant growth (by 24.1%) of death rate from tuberculosis in 2010 as compared with 2009.

Thus, decrease of indices of clinical follow-up of tubercular patients nowadays is due to the lowered efficiency of treatment of TP patients among FRP, insufficient range of surgical treatment, insufficient examination of patients when taking off the register from active groups of follow-up, groundless transfer of tubercular patients into inactive groups.

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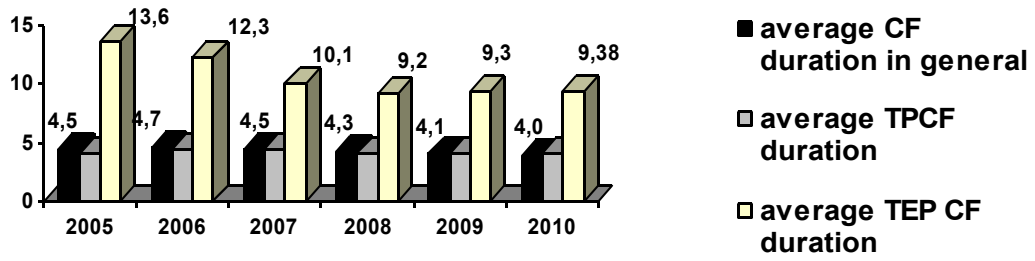

Fig.1. Average duration of the clinical follow-up (in years) of antitubercular institutions contingents during the period of 2005-2010

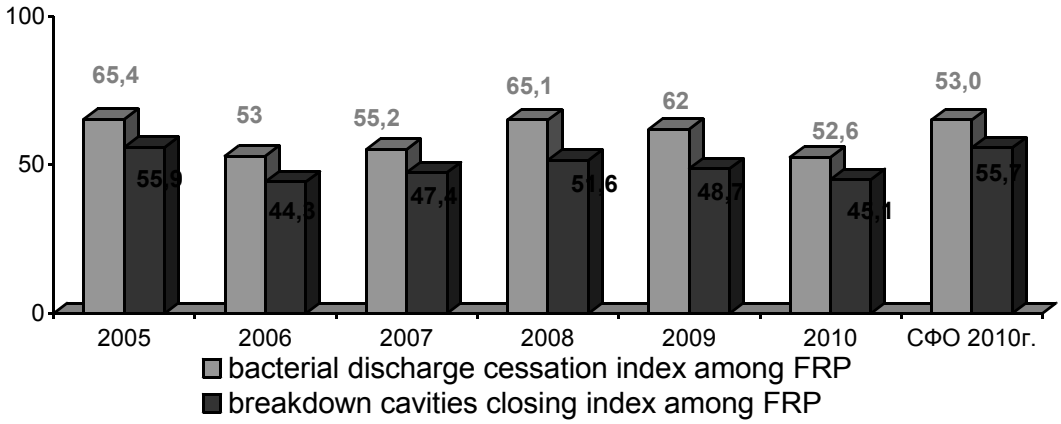

Fig.2. Dynamics of bacterial discharge cessation and breakdown cavities closing indices among FRP with tuberculosis in the Irkutsk region for the period of 2000-2010

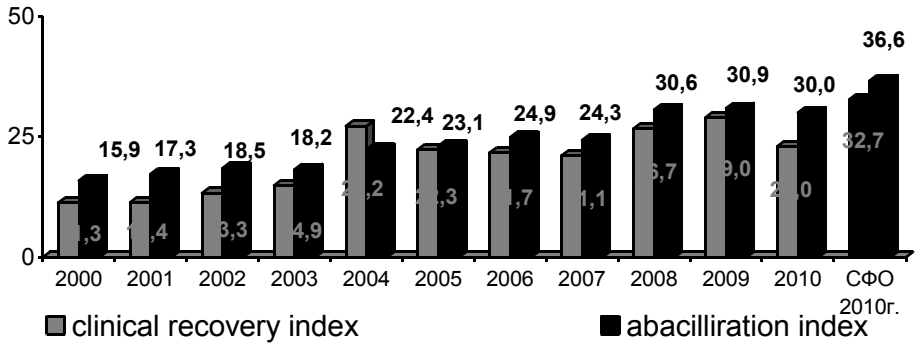

Fig.3. Dynamics of clinical recovery and tubercular contingents abacilliration indices in the Irkutsk region during 2000-2010. (%)

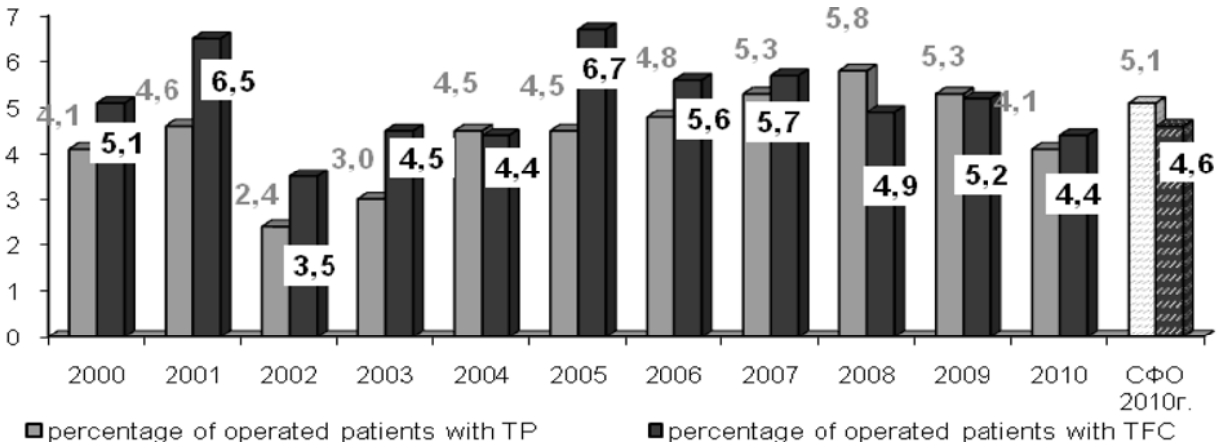

Fig.4. Specific gravity of operated patients with TP and TFC in the Irkutsk region during 2000-2010. (%).

Table 1.

Planned and actual indices of clinical recovery and abicilliration of tubercular patients during 2005-2010

Years	indices			
	Clinical recovery, %		Abacilliration, %	
	plan	fact	plan	fact
2005	23,7	22,3	33,8	23,1
2006	22,5	21,7	35,3	24,9
2007	23,3	21,1	36,7	24,3
2008	24,6	26,7	39,1	30,6
2009	23,3	29,0	37,0	30,9
2010	23,6	24,4	35,9	30,0

Table 2.

Indices of tuberculosis recurrence rate in the Irkutsk region during 2005-2010

Indices	Years					
	2005	2006	2007	2008	2009	2010
Recurrence rate in people cured of tuberculosis (per 100,000 of population)	10,6	9,2	9,5	10,2	9,6	9,3
Early recurrences rate in patients with TP (per 100 registered in CF group III)	3,0	3,0	2,8	3,8	2,9	3,0
Early recurrences rate in patients with TEP (per 100 registered in CF group III)	0,1	0,1	0,1	0,2	0,2	0,2
Recurrence percentage among followed-up patients (%)	0,6	1,5	1,4	1,5	2,0	2,3
Percentage of people with recurrence among first revealed patients (%)	11,4	8,6	8,1	8,0	8,0	7,6

Table 3.

Quality indices of work at the tubercular infection foci in the Irkutsk region during 2005-2010

Indices (CF efficiency criteria)	Years					
	2005	2006	2007	2008	2009	2010
Morbidity of people contacting with tubercular patients (0.2-0.3 per 100,000 of population)	3,6	4,2	3,9	3,1	3,6	3,5
Morbidity of contact people in bacillary foci (not more than 0.25 per 100 registered in group IV)	1,9	1,8	1,6	1,3	1,2	1,3
Morbidity of people due to occupational contact (not more than 0.25 per 100 registered in group IV)	0,6	0,4	0,7	0,25	0,2	0,2
Percentage of people falling ill due to contact among FRP (0.5-1.0%)	3,8	3,9	3,2	2,4	3,0	2,8
Percentage of people falling ill due to contact among contingents (0.2-1.0%)	0,6	0,8	0,7	0,6	0,7	0,7
Range of FRP hospitalization (98.0-100.0%)	88,6	83,6	85,0	81,4	81,3	78,2
Range of hospitalization of FRP with bacterial discharge (98.0-100.0%)	93,8	93,8	90,4	81,3	89,1	91,6
Range of hospitalization of contingents with bacterial discharge (98.0-100.0%)	71,3	71,9	73,1	75,1	60,7	63,9
Ratio of clinically cured people to those who died from active tuberculosis	2,5:1	2,8:1	2,7:1	3,1:1	3,3:1	2,2:1

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