

Psychosocial Characteristics of the Disease in Patients with Tuberculosis

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Abstract: Psychological stress was measured using the Patient Health Questionnaire nine-item depression scale (PHQ-9) and the seven-item Generalized Anxiety Disorder scale (GAD-7). These were selected for the study since they are well-validated, frequently used screening tools, which are easy and reliable. A comparative analysis of reactions to the disease in children with a turn of tuberculin samples and various forms of active pulmonary tuberculosis showed that in the early period of tuberculosis infection in children aged 10-14 years, 50% have predominantly adaptive types of attitude to this condition, in the structure of which the anosognosic type of attitude to the disease was 15.6%, and in patients with tuberculosis in the lungs, the incidence of adaptive types of disease attitude (TOD), including anosognosic, decreased by 3-5 times. The high significance of the diagnosis as a traumatic and stigmatizing factor has been established. With positive dynamics in the treatment process, anosognosia again came out on top, the defense mechanisms were denial of the disease, detachment from the past and hypersocial behavior.

Keywords: tuberculosis, diagnosis, tuberculosis, psychosocial characteristics.

Introduction. Tuberculosis (TB), a chronic communicable disease caused by *Mycobacterium tuberculosis* (MTB), is a significant cause of morbidity and mortality worldwide. The World Health Organization (WHO) consider TB as one of “the top 10 causes of death worldwide and the leading cause of death from a single infectious agent” [1]. Economic, social and psychological distress are seen in individuals affected by TB, affecting their quality of life. However, the magnitudes of distress and psychological interventions and their effect on treatment outcomes are often undervalued and have not been adequately evaluated. This issue highlights the importance of measuring health indicators beyond traditional parameters such as morbidity and mortality rates. To the best of our knowledge, there are no prospective Indian studies available that assess both psychological stress in TB patients. Our study demonstrated that anxiety and depression were common among TB patients and there was negative impact on the quality of life. The demographic results of the study were consistent with other studies. In the study, the majority of patients were male, which was in accordance with the WHO report that 56% of people who developed TB in 2019 were male [7]. The majority were dwelling in thatched and tiled houses with no education or only primary education and one fourth were unemployed. This was in accordance with previous studies that showed that low socio-economic status and poor living conditions such as poor quality of life, inadequate ventilation, poor sanitation and water facilities are strong risk factors for TB [11]. The initial idea of the WCB structure, which includes two levels (sensitive and intellectual), was further differentiated by highlighting four levels: 1) sensual – a complex of painful sensations; 2) emotional – the experience of the disease and its consequences; 3) intellectual – knowledge about the disease and its real assessment; 4) motivational – developing a certain attitude to the disease, changing lifestyle and updating activities aimed at recovery [3]. There are various circumstances that are undoubtedly- However, the following take part in the formation of the HCB: objective living conditions of the patient (social conditions, objective severity of the disease, objective prognosis, degree of vital threat), subjective factors (patient's orientation, level of general activity, features of self-awareness, the whole complex of morbid personality traits), situational factors, especially those related to treatment (severity and the duration of medical procedures, the degree of dependence of the patient on medical equipment and personnel, etc.) [15]. A subjective assessment of one's condition and the nature of painful symptoms is rarely adequate, since a number of serious somatic diseases are asymptomatic for a long time, and with strong affective reactions, a greater number of complaints without objective pathology is possible [1]. Numerous

clinical observations show that in the initial stages of the disease, when the symptoms are still insignificant, the reaction to the disease may be manifested by its denial or by downplaying the significance of the consequences and possible complications, which is confirmed by psychodiagnostic studies. The opposite pattern is observed in diseases with a clearly defined clinical picture, chronic tension, the presence of pain or other bodily or mental suffering, in which maladaptive types of attitude to the disease manifest themselves with the greatest frequency [16]. A comparative analysis of reactions to the disease in children with a turn of tuberculin samples and various forms of active pulmonary tuberculosis showed that in the early period of tuberculosis infection in children aged 10-14 years, 50% have predominantly adaptive types of attitude to this condition, in the structure of which the anosognosic type of attitude to the disease was 15.6%, and in patients with tuberculosis in the lungs, the incidence of adaptive types of disease attitude (TOD), including anosognosic, decreased by 3-5 times. The level of self-esteem of tuberculosis patients is closely related to the peculiarities of their perception of other people's attitudes [19]. Stigmatization of tuberculosis patients by their social environment plays a very important role [21]. All this directly affects adherence to treatment [22-24] – after all, the issue of patients' non-compliance with doctor's prescriptions, "disruptions" of treatment contributes to the formation of stable forms of the disease and relapses. The aim of the work is to determine the types of attitudes to the disease that prevail in patients with pulmonary tuberculosis and psychosocial variables that determine the attitude of these patients to the disease. The studied variables include the duration of the disease, gender, employment, education, family, awareness of the disease, relationships with others, and the presence of bad habits.

Material and methods. We included 86 newly diagnosed adult PTB and EPTB patients who were newly initiated on antituberculosis treatment (ATT) or had started ATT less than a month ago. We excluded multidrug-resistant/extensively drug-resistant cases, those aged less than 18 years, those on ATT for more than a month, those with underlying psychiatric illness and those who refused to consent. After obtaining informed consent, we collected the patient's demographic and socioeconomic characteristics. Information about education, housing, employment and cigarette and alcohol consumption were captured. We assessed the clinical presentation, comorbid illnesses, microbiological and radiological characteristics. The diagnosis was made less than 2 months in 25 people (41.7%), from 2 to 6 months – 19 people (31.7%), from 6 months to 1 year – 13 people (21.6%), 3 people (5%) have been on treatment for more than a year. The results of the study of the professional composition of patients showed that the majority of patients are workers – 31 people (55.6%); employees – 5 (8.3%); employed in agriculture – 2 (2.7%); students – 2 (2.7%); pensioners – 3 (5.6%); unemployed – 15 (25.1%). The work used clinical interviews and psychodiagnostic techniques: 1) the questionnaire of E.M. Bogorodskaya et al. (2006) to determine patients' socio-demographic indicators, social risk factors, awareness of the disease, adherence to treatment, attitude to the disease and society; 2) a technique for the psychological diagnosis of types of attitude to the disease (TOBOL). Statistical processing of the obtained data was carried out using the computer program "Microsoft Excel".

Results. The results indicate that the majority of patients (78.3%) believe that they do not have severe clinical manifestations of the disease, especially this is typical for subjects with newly diagnosed pulmonary tuberculosis in the first month of illness and more than three months of hospitalization. Subjectively, this creates a perception of oneself as healthy. The majority of respondents attributed to the symptoms of the disease: weakness, drowsiness (66.7%), sweating (75%), back pain (28.3%), gastrointestinal problems (63.3%). The greatest number of symptoms are noted by patients during the initial period of taking medications. The emotional level of HCB was determined by the characteristics of the patients' response to the disease and its consequences. To the question "How did you react to the fact that you were diagnosed with tuberculosis?" 25% of respondents replied that they panicked, 22.2% closed down and withdrew into themselves, but the majority – 52.8% calmly reacted to the diagnosis. The general mood background in most patients is good and optimistic – 83.3%, 16.7% report mood swings. 94.4% believe in a positive outcome of treatment, 5.6% cannot give a single answer to this question, while 5.6% do not want to continue treatment. The presence of fears and anxiety was noted in 35% of the subjects. The worries are related to the uncertainty of their professional future, concern

for the health of their relatives. It should be noted that during the study, a group of patients (12 people), mostly women, refused to participate in the questionnaire and diagnosis. Observations and conversations with medical staff indicate the presence of depressive, apathetic and angry emotional reactions in these patients, which was an indication for consulting a psychotherapist. When assessing the cognitive level of HCB, we took into account the patients' ideas about the duration of treatment, their own capabilities in the fight against the disease, and the peculiarities of the formation of the information environment. "How long do you need to recover?" – answering this question, 22.2% believe that six months, 19.4% – one year, 11.1% – indicate three to four months, which indicates their adequate assessment of their condition, the nature of the disease and treatment. The lack of awareness may be indicated by such an answer to this question as "I don't know" – 47.2% [8]. A study of the peculiarities of the formation of the information environment of tuberculosis patients showed that the majority of respondents seek to expand their knowledge about the disease – 83.4%, and 8.6% do not have this need. The main source of information for the bulk of patients is the attending physicians and medical staff of the hospital – 35.8%, and for 30.6% – wall newspapers in the clinic. The Internet as a source of information is the second most popular for 23.2%. In addition to the above, popular science literature, periodicals, other patients and relatives were also noted. Moreover, as a result of communication with other tuberculosis patients, 72.2% had a desire and confidence in the outcome of treatment, 19.4% had no desire to be treated, and 5.6% claimed that as a result of exchanging information with other patients, the desire to be treated disappeared and they began to take not all drugs. Answering the question: "Who should help you get cured?" – 44.4% believe that doctors and medical staff, 50% are convinced that the outcome of treatment depends only on themselves; 5.6% rely on the help of relatives and friends. As a place of treatment, respondents indicate such options as "hospital" – 30.6%; "live at home, but come for pills every day" prefer 58.2%; "I want the pills to be brought home" – 5.6% think so, and for 5.6% – "it doesn't matter." The use of the TOBOL questionnaire data in the work will allow us to deepen the results of the study of HCB in patients with pulmonary tuberculosis. Based on the results obtained, the predominant TOBS were grouped into three blocks. The first block consists of 30 people (50%) and includes ergopathic (22 people – 36.7%), anosognosic (6 people - 10%) and harmonious (2 people – 3.3%) types of attitude to the disease, in which mental and social adaptation is not significantly impaired. The second block (4 people – 6.7%) includes anxiety (3 people – 5%) and hypochondriacal (1 person - 1.7%) TB, which are characterized by an intrapsychic orientation of personal response to the disease, which causes violations of social adaptation of patients with these types of response. Neurotic, melancholic, and apathetic types of attitude are absent in this sample. The third block (12 people – 20%) included sensitive (11 people – 18.3%), egocentric (1 person – 1.7%) TOBS, which are characterized by an interpsychic orientation of personal response to the disease, which also causes violations of social adaptation of patients. Dysphoric and paranoid types of attitude were not expressed in these subjects. Mixed types of attitude to the disease: ergopathic-anosognosic – 6 people (10%), ergopathic-sensitive - 5 people (8.3%), melancholic-sensitive - 1 person (1.7%), apathetic-paranoid - 1 person (1.7%), ergopathic-anxious - 1 person (1.6%). The predominance of the ergopathic type in patients is characterized by- with the desire to continue working, maintain professional status and the opportunity to continue active work in the same capacity. Women are worried about the health of their children, feeling guilty that they will have to take medications that can harm their health. Anxiety becomes a source of conflict with others, the subjects admit that "they can be impatient and irritable with doctors and medical staff and then regret it," it seems to them that those around them are shunned and cannot understand their suffering. From a conversation with the medical staff, it was found that this category of patients more often than others enters into conflicts, often behave irritably. The cognitive component occupies a special place in the structure of the HCB: the constant search for additional information about the disease, its further consequences and treatment options. They often communicate with other patients, and they themselves note that as a result of such conversations, "the desire to be treated has disappeared." Egocentric and hypochondriacal TOB were noted in only two of the subjects. An interesting fact is that these patients were diagnosed repeatedly, have an open form of this pathology (CD+) in their anamnesis, and there were interruptions in treatment. The sensitive and emotional levels are pronounced – they note a large

number of complaints about their well-being, depression, and pessimism. At the same time, they do not show interest in additional information about treatment options, doubt the possibility of recovery, rely solely on doctors and ideally wanted medicines to be brought to their homes. An analysis of the results of a study of the features of HCB in patients with pulmonary tuberculosis indicates that the fact that an alarming type of attitude to the disease is present in only 5% of the subjects (and all of them are women with higher education), to a certain extent determines the response of patients to the diagnosis - "panicked". Anxiety becomes a source of conflict with others, the subjects admit that "they can be impatient and irritable with doctors and medical staff and then regret it," it seems to them that those around them are shunned and cannot understand their suffering. From a conversation with the medical staff, it was found that this category of patients more often than others enters into conflicts, often behave irritably. The cognitive component occupies a special place in the structure of the HCB: the constant search for additional information about the disease, its further consequences and treatment options. They often communicate with other patients, and they themselves note that as a result of such conversations, "the desire to be treated has disappeared." Egocentric and hypochondriacal TOB were noted in only two of the subjects. An interesting fact is that these patients were diagnosed repeatedly, have an open form of this pathology (CD+) in their anamnesis, and there were interruptions in treatment. The sensitive and emotional levels are pronounced – they note a large number of complaints about their well-being, depression, and pessimism. At the same time, they do not show interest in additional information about treatment options, doubt the possibility of recovery, rely solely on doctors and ideally wanted medicines to be brought to their homes. Conclusion An analysis of the results of the study of the features of HCB in patients with pulmonary tuberculosis indicates that there is no need for treatment, since most patients indicate the presence of forced social isolation, the negative attitude of others towards their diagnosis, which causes negative emotions. The alarming TOB is most typical for women with higher education. The dominant motives are the search for additional information about the disease and anxiety for loved ones. Scientists show that a doctor's more complete understanding of the psychosocial characteristics of the patient's attitude to his disease helps in the formation of psychotherapeutic targets in the system of complex therapy of somatic disease.

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