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COGNITIVE-BEHAVIOURAL THERAPY FOR MEDICALLY UNEXPLAINED SYMPTOMS. EFFICACY AND PROCEDURES

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medically unexplained symptoms
Cognitive–Behavioural Therapy
psychosomatic disorders

Summary

People experiencing somatic symptoms for which there is no medical explanation constitute up to approx. 20% of the population. The lack of data concerning etiology of ailments such as chronic fatigue or headaches, back pain and stomach-ache, impede diagnostics and treatment. There is no clear terminology referring to the described ailments. Despite many ambiguities, numerous clinical trials bring about increasingly extensive data concerning treatment which results in implementation of standards of conduct in diagnostics and treatment. Many of them indicate high efficiency of cognitive behavioural therapy in selected sets of symptoms. It is a type of psychotherapy in which the impact of cognitive processes and the manner of thinking on emotional functioning is given significant meaning. This therapy applies techniques of changing behaviours and maladaptive beliefs, aiming at better management of stress and difficult emotions. This elaboration arranges data concerning research on cognitive behavioural therapy in treating patients with the MUS syndrome, i.e. medically unexplained symptoms. Reviews of research and recommendations of organizations involved in improvement of health care, such as NICE, were used. Examples of medically unexplained symptoms which have been most extensively studied were discussed such as chronic fatigue syndrome, irritable bowel syndrome and fibromyalgia. Also, the manner of understanding and therapy methods of the listed diseases were presented. Final conclusions consider implementation of the collected data in clinical practice. They highlight the essence of cooperation between health care specialists for complex treatment of patients with medically unexplained symptoms.

Medically unexplained symptoms

"Medically unexplained symptoms" are also referred to as the "MUS syndrome". In recent years with an increasing frequency, the term is used to determine somatic ailments for which no reasons in abnormal functioning of the body can be found. Results of the conducted diagnostic examinations do not indicate any deviations from the standards or they do not justify intensification of the perceived sensations. The most frequent complaints of this type are: sore muscles, headaches, painful joints, stomach aches, chest pain and fatigue, nausea, dizziness [1]. The MUS syndrome constitutes a broad group of diseases also determined as psychosomatic disorders, symptoms related to stress, functional diseases, somatization. In the ICD-10 classification they are determined among others as "nervous disorders associated with stress and in the somatic form" (categories F40-48 in ICD-10) as well as functional somatic syndromes, such as irritable bowel syndrome (K58) or fibromyalgia (M79.7).

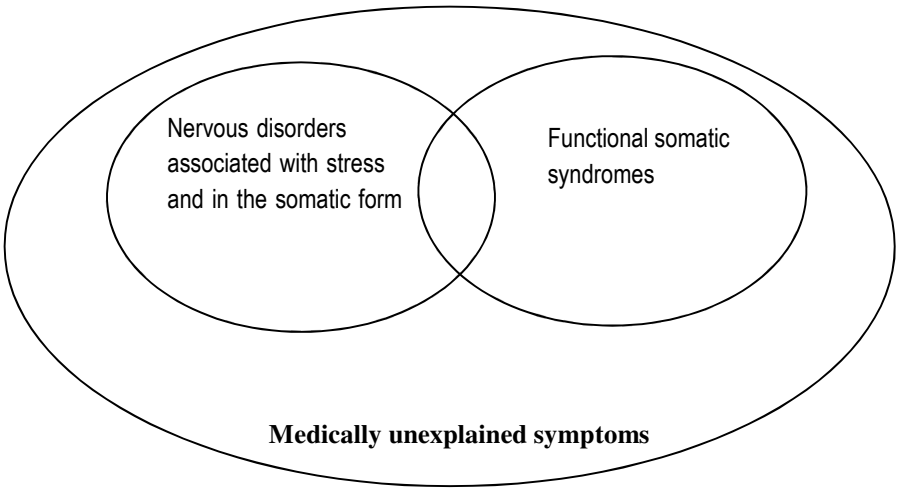

Fig. 1. **Diagram illustrating the scope of terms determined as "medically unexplained symptoms" suggested by Francis Creed's team [2].**

In Table 1 exemplary symptoms and syndromes divided into various fields of medicine were presented. The list illustrates that symptoms may concern various systems in the body and patients who suffer from them report to physicians of numerous specialties looking for appropriate treatment.

Application of the term "MUS syndrome" is probably temporary due to its significant limitations. An advantage of this term is clear information that somatic diseases were excluded in a given patient, which may constitute a certain relief for the patient. However, studies indicate that patients expect the so-called positive diagnosis which will name their disease and not only eliminate diseases they do not suffer from, as in the discussed case. It may take the hope of recovery away; it may also seem that diseases are divided into mental and somatic diseases. In modern medicine, this division is often departed from and replaced with holistic perspectives and biopsychosocial models [3].

An expression of a more holistic approach to health and disease may be a change in the Diagnostic and Statistical Manual of Mental Disorders (DSM) classification from "Somatoform disorders" in DSM-IV-TR [4] to "Disorders with somatic symptoms and other related to them" in DSM-V [5]. Also "the disorder with anxiety about the state of health (hypochondriacal)" was transferred into this group and a new category named "Mental factors affecting another general medical condition" was created. In relation to the ambiguity both in the field of terminology and diagnostics, the World Health Organization suggests the following term: "bodily distress". This term is already present in ICD-11 Primary Health Care for the needs of general practitioners [6].

Table 1. **Selection of syndromes and symptoms divided into fields of medicine [2].**

Medical speciality	**Functional somatic syndrome**
Gastroenterology	Irritable bowel syndrome
Gynaecology	Premenstrual syndrome, chronic pelvic pain
Rheumatology	Fibromyalgia, chronic lower back pain
Cardiology	Atypical or non-cardiac chest pain
Respiratory medicine	Hyperventilation syndrome
Infectious diseases	Chronic fatigue syndrome
Neurology	Tension headache, pseudo-epileptic seizure
Dentistry	Temporomandibular joint dysfunction, atypical facial pain
Ear, nose and throat	Globus syndrome
Allergy	Multiple chemical sensitivity
Orthopaedics	Whiplash-associated disorder
Anaesthesiology	Chronic benign pain syndrome
Psychiatry	Somotoform disorders, neurasthenia, conversion

In relation to numerous limitations of the current terminology, it is not recommended to use the term "MUS syndrome" in contact with patients, and instead it is suggested to pose a more specific diagnosis of a set of symptoms which in selected better-known diseases is possible based on the ICD-10 classification [7]. Differential tests also indicate that although depressive and anxiety disorders often co-exist with the MUS syndrome, they constitute separate diseases. Results of other studies suggest that medically unexplained symptoms cannot be diagnosed as another disease over time [2].

Despite the lack of consistent and commonly acceptable terminology, epidemiological data indicates a large group of patients with the MUS syndrome who, reporting their ailments, hope for effective treatment. They constitute approx. 15-19% of patients seeking help in primary health care institutions and 30-53% of patients seeking help in specialized health care institutions [2]. Fortunately, the lack of data about the ethiopathogenesis of medically unexplained symptoms does not mean lack of treatment possibilities.

Standards of conduct in the MUS syndrome

An increasing interest of researchers and clinicians can be observed in seeking answers to the problems of patients with the MUS syndrome and striving to improve health care concerning them. In European countries, such as Great Britain, Holland, Germany, procedures were developed based on data from various clinical trials which suggest how to treat such a group of patients. In the British recommendations [7], we find strategies for general practitioners. At the preliminary stage, the role of forming a diagnosis is underlined, also taking into account patients' beliefs concerning their symptoms. Also, education about the role of biopsychosocial factors in sustaining a disease is recommended, which is presented in detail in the recommendations prepared by the Dutch National Healthcare Group [8]. The significance of the doctor-patient relationship is also highlighted in effective treatment of MUS syndrome patients. Further steps are determined individually based on the severity of the disease. The recommendations contain detailed biopsychosocial criteria for the assessment of ailment

intensification usually performed by the attending physician. In the mild course of the disease, normally a general practitioner can take holistic care of the patient. In the case of moderate symptoms, it is recommended to refer the patient to the cognitive-behavioural therapy. While in the acute course, multidisciplinary treatment is suggested led by a team in which one of the specialists has the supervising role. Such an approach requires communication between specialists as well as complementarity of different forms of treatment of the patient's problem and often a combination of medical and psychological care.

Cognitive-behavioural therapy as an evidence based method

Cognitive-behavioural therapy (CBT) is a trend in psychotherapy developing very intensely since the interwar period. It has undergone an evolution from behaviourism, through cognitive therapy, until it has become a group of cognitive-behavioural therapies, including among others mindfulness therapy or acceptance and commitment therapy. At the bottom of the concept, there is an assumption that human reaction to a given situation is determined by what the person thinks about a given event, i.e. what meaning he/she will give to the event. Depending on how a given situation is perceived, emotional reactions and behaviours adequate for the given meaning will occur [9]. For instance, if we perceive a man running towards us as dangerous, we will be afraid and we may start running away. However, if we think that the person is running because he/she does not want to miss their bus, we will peacefully continue what we had been doing before we noticed the person. On Fig. 2 the basic model of understanding of mental functioning in this approach was presented. Using it, a cognitive-behavioural therapist arranges components of the problem with the patient dividing them into five elements: thoughts, emotions, behaviours, physiological reactions and environmental reactions.

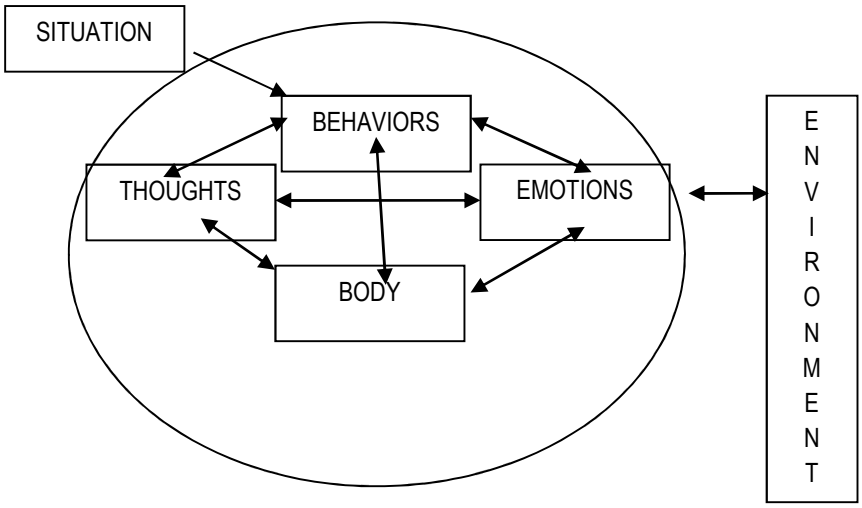

Fig 2. **Cognitive-behavioural model [9]**

The diagram presents the existing dependencies between the somatic, mental (thinking, emotions and behaviours) zones and the environment of the individual. Such a perspective corresponds to the biopsychosocial model of health and disease [10]. One of the most important discoveries within CBT is the theory of cognitive psychological disorders. It assumes that

certain disorders, e.g. depression or panic disorder are accompanied by a certain way of thinking. This allowed models specific for various mental disorders to be created and therapeutic methods to be adjusted to them. The most frequently applied therapeutic techniques include psychoeducation, i.e. providing knowledge about emotions, physiology and dependencies between feeling, way of thinking, and behaviour. Also, the so-called cognitive restructuring, i.e. techniques such as discussion with thoughts which aim at obtaining a more rational and objective perspective on a given situation is applied as well as behavioural techniques, such as increasing physical activity and relaxation exercises [9].

Clearly determined disease factors in mental disorders, i.e. specific schemes of thinking and behaviours as well as interventions, i.e. sets of techniques, adjusted to them also constitute a significant facilitation in conducting methodologically correct clinical trials. Therefore, CBT constitutes an example of an evidence based practice and its application is verified with regard to an ever-growing group of diseases and ailments [11].

CBT in treatment of the MUS syndrome

Medically unexplained symptoms constitute a very broad and diverse group of diseases the criteria of which often overlap. Most studies on the efficacy of treatment focuses on selected diseases.

Kroenke [12] reviewed literature focusing mainly on somatoform disorders according to the DSM-IV criteria. He took 34 studies conducted in 2006 into account, in which nearly 4,000 patients participated with the following disorders: hypochondria, somatization, dysmorphophobia, conversion disorders. The results indicate that methods with proved efficacy are CBT, efficacy of which was confirmed by 11 of 13 studies, and antidepressants, efficacy of which was confirmed by 4 of 5 studies. Less clear evidence also indicated usefulness of the consultation letter written by a patient to their general practitioner. Studies concerning other therapeutic methods did not indicate their efficacy or the results were ambiguous. Referring to the studies conducted by Kroenke, difficulties are indicated regarding their comparison due to their inhomogeneity, e.g. concerning terminology or study conditions. However, studies determine efficacy of CBT with large probability. There is an example available of a test during which a group of patients suffering from pain disorders were subject to 10 sessions of CBT. Reduction of attention on the body, regulation of activity, increasing awareness of the felt emotions, cognitive restructuring and elements to improve interpersonal communication were used in the test. Symptoms were reduced in half of the patients, and improvement was maintained after the meetings [Escobar et al. 2007 after: 2]. An example of a study in which for a change efficacy of CBT was not indicated, is a project with the participation of MUS syndrome patients where in the control group, a structured program was also used, including interventions such as keeping a diary of symptoms and regular appointments with the general practitioner. Differences between the methods were not indicated, and in the conclusions a very good reaction of patients with the MUS syndrome to the structured medical care was discussed [Sumathipala et al. 2008 after: 2].

A review of literature concerning functional disorders, including irritable bowel syndrome, headaches, back pain, fibromyalgia, chronic fatigue, indicates significant efficacy of both cognitive-behavioural therapy as well as selected antidepressants. At the same time, Kroenke and Swindle [13] write about advantages of implementing CBT, such as no side effects

and no interaction with medications. There are also prerequisites that the effects may improve with time after the completion of the treatment. The maintained improvement after 7 years was observed in treatment of tension headaches and migraines using CBT, relaxation and biofeedback [Rains et al. 2005, after: 2].

Undoubtedly, cognitive-behavioural therapy is commonly applied in treatment of most disorders from the somatization group, including anxiety about health or dysmorfophobia, which is clearly justified by studies conducted on its efficacy [12]. In the ICD-10 classification, disorders from this group are included among mental disorders, and therefore in such cases it is easier to justify application of non-pharmacological treatment. Functional disorders, although associated with stress and emotional problems, have unknown aetiology, and thus, it is more difficult to develop effective treatment methods for them. Therefore, an increasing number of studies on the subject are conducted, and disorders gaining the most interest are: irritable bowel syndrome, chronic fatigue syndrome and fibromyalgia. Below, results of the studies on treatment of the listed diseases and their understanding as well as treatment from the CBT perspective were presented.

Irritable bowel syndrome

Irritable bowel syndrome (IBS) is a chronic disease manifested by pain or discomfort in the abdomen, changes in the rhythm of bowel movements and/or in stool consistency. Causes of IBS have not been clarified; they are probably complex and stress is listed among significant ethiopathogenic factors. Treatment involves diet counselling, pharmacotherapy, including among others application of diastolic or antidepressant medications and psychological therapies [14]. A review of methods and recommendations has been recently performed among others by the National Institute for Clinical Excellence (NICE), and in Poland by the Polish Gastroenterology Association (Polskie Towarzystwo Gastroenterologii (PTG)). Among psychological methods recommended by PTG in IBS treatment, CBT and hypnotherapy were included as methods of proved efficacy [15]. NICE [16] recommends inclusion of CBT, hypnotherapy or psychological therapy, simultaneously indicating the difficulty in determining the stage of treatment when it would be recommended, and they suggest further studies on the subject.

Cognitive-behavioural therapy in IBS is based on the assumption that discomfort in the abdomen is intensified by how the patient interprets the felt physical sensations and how he/she behaves consequently and what he/she feels. If pain or discomfort causes thoughts: “something wrong is happening with me”, “I cannot control it”, “I have to go to the toilet quickly”, it leads to anxiety and fear, and it increases focusing on this body part, which make the sensations even stronger. They go to the toilet more often and they introduce changes in their diet, e.g. skipping breakfast. These are known security behaviours the number of which is growing when the disease is progressing. With time, patients start to avoid leaving home or they start to organize their time outside their home taking the possibilities to easily use the toilet into account. Paradoxically, with intensification of security behaviours, anxiety also intensifies, which impacts sensations in the intestines and their functioning. In CBT, interventions involve educating patients about IBS as well as interruption of the above described vicious circle. The introduced techniques aim at limiting excessive attention paid to physical sensations, cognitive restructuring e.g. catastrophic thoughts, restoration of regular diet and activity [2].

Chronic fatigue syndrome

Chronic fatigue syndrome (CFS) is manifested most of all by chronic fatigue which is felt for at least 6 months. It is often accompanied by sore throat, painful lymph nodes enlargement, sore muscles and painful joints, headaches, sleep disorders, problems with concentration and memory [17]. Ethiopathogenesis of the syndrome has not been determined, and the explaining concepts indicate possible genetic, immunological, psychological, hormonal background or resulting from viral infections. Mainly women aged 20-50 suffer from the disease, and depending on various sources, it is diagnosed in 0.002 to 1% of the population; in Poland, the diagnosis is made very rarely [18]. Numerous studies concerning treatment of chronic fatigue syndrome were conducted. On their basis, it is believed that two most effective therapeutic methods are cognitive-behavioural therapy and graded exercise therapy (GET) [2]. The GET program assumes implementation of regular physical exercises (based on the previously conducted exercise test to determine fitness) as well as educating the patient and taking care of regular lifestyle [19]. Currently, there is not sufficient evidence proving efficacy of pharmacotherapy. NICE [20] recommends consideration of pharmacotherapy when pain and sleep disorders become very bothersome. In one of the studies on the efficacy, researchers attempted to determine whether it is possible to eliminate symptoms in patients with CFS completely after the application of cognitive-behavioural therapy. Criteria of complete recovery manifested by the lack of symptoms typical for CFS were established. It turned out that 23% of the studied patients fulfilled the criteria of recovery. Obtaining such an improvement was easier if the patients did not suffer from co-occurring disorders [Knoop 2007 after: 2].

It is assumed that the factor intensifying and/or maintaining the chronic fatigue syndrome is limited activity of the patients. Avoiding physical effort significantly deteriorates functioning of the body decreasing heart rate which lowers the amount of oxygen supplied to the brain, muscles and body organs. It affects the musculoskeletal system, secondarily intensifying the feeling of fatigue. Psychoeducation about chronic fatigue syndrome and its impact on physiology as well as working on the change of lifestyle usually constitute the initial stage in cognitive-behavioural therapy of the patients with CFS. Treatment assumptions include determination of specific goals, planning rest and physical activity as well as activation. Significant work also concerns negative thought patterns as well as dealing with stress [3, 21].

Fibromyalgia

Fibromyalgia is a disease in which dominating symptoms include generalized pain in the musculoskeletal system, feeling stiff and sensory disturbance. Co-occurring symptoms, such as tiredness and sleep problems, make it difficult to distinguish fibromyalgia from chronic fatigue syndrome as well as somatization disorders. Ethiopathogenesis is not known; factors, such as changes in neuronal activity in the central nervous system, abnormal metabolism of biogenic amines and immune disorders are indicated. In Europe, the problem concerns approx. 1% of the population, more frequently women than men [22]. Treatment of fibromyalgia is usually multidirectional and focused on symptom reduction. Pharmacotherapy, cognitive-behavioural therapy and physical exercises are used. Recent studies using only CBT indicate permeant improvement within symptom reduction. A review of studies in this field indicates ambiguous results, as in some studies improvement is achieved, and in some – it is not [2].

Despite that, according to the review of recommendations concerning treatment of fibromyalgia performed based on data from Israel, Canada and Germany, it is the most recommended method of treatment next to aerobics and pharmacotherapy [23].

Cognitive-behavioural therapy in fibromyalgia assumes correction of beliefs and behavioural changes. Catastrophic beliefs of the patient that pain has horrible consequences for the body and physical activity should be avoided to prevent it are discussed. Avoiding physical activity is effective in the case of acute pain, less - in the case of chronic pain. Psychoeducation on the subject and increasing physical activity constitute elements of the treatment process. Also, work concerning the sense of helplessness plays an important role. Apart from increasing physical activity and working on the patient's beliefs, strategies of dealing with stress and relaxation techniques are often introduced, as well [2].

Conclusions

Thanks to numerous studies, medically unexplained symptoms despite their mysterious and controversial nature are determined with an increasing precision and treated more effectively. The need for further research in the field of ethiopathogenesis, diagnosis and treatment is obvious. The decision about such a diagnosis is not easy both for the patient and the physician, as it raises concerns whether something has not been overlooked and whether symptoms reported by the patient do not indicate a more serious disease. This underlines the particular importance of precise diagnostics. Symptoms, which are difficult to justify, are also accompanied by the risk of social misunderstanding and disregard. The diagnosis determining e.g. damage of a body organ, bacterial infection or a genetic defect, is usually less affected by a negative judgment of society. Unfortunately, in this regard medically unexplained symptoms can raise similar feelings to mental problems, such as depression. It may seem that the patient simulates or exaggerates and if they wanted to they could pull themselves together. Therefore, a very important matter is knowledge about medically unexplained symptoms as well as about treatment possibilities. Knowledge of the standards of conduct which in this case frequently involve various interactions e.g. medications and psychotherapy, is an essential element in developing effective treatment. Due to numerous ambiguities and diversity of available therapeutic methods, exceptional cooperation between specialists and the patient is very important. It constitutes a significant challenge for the physician and representatives of health care professions, it requires team work, time and openness to combine numerous perspectives in understanding health and disease in the case of a given patient. Time committed to patients whose difficulties concern theoretically different zones, which are however mutually connected and interacting with one another, constitutes an essential condition.

Results of the studies confirm usefulness of cognitive-behavioural therapy in treatment of irritable bowel syndrome, chronic fatigue syndrome and fibromyalgia. There are many articles concerning efficacy of CBT in treatment of other medically unexplained symptoms. However, this area requires further studies. Before making more precise diagnoses and before implementation of effective treatment programs are possible, it is also worth remembering about the particular significance of the relationship between the specialist and the patient with the MUS syndrome. For patients, it is important that their experiences and unpleasant sensations are acknowledged, including the feelings which accompany them. At the same time, apart from

support, it is important to implement methods which may improve the patient's functioning and strengthen their belief that their disease can be treated.

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