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# Non-cognitive symptoms of dementia

## Niekognitywne objawy demencji

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S u m m a r y

Dementia is an important health problem affecting elderly people, not only because it disturbs higher cortical functions, but as well because of its common occurrence, especially in later decades of life. Apart from the cognitive functions disorder, the clinical picture of dementia consists of non-cognitive symptoms, such as behavioral disorders, psychotic symptoms and affective disorders. They comprise an integral part of the illness and are present in 64-90% of dementia patients. Non-cognitive symptoms of dementia comprise an important part of dementive process, therefore their diagnostics is a step in the way to stating a diagnosis. Some of the non-cognitive symptoms of dementia can be recognised on the basis of the observation of the patient. Among others, these symptoms include anxiety, agitation, wandering around, hoarding, socially unnacepted behaviours, sexual disinhibition, shouting and agressive behaviours. The diagnosis of other disorders require more detailed examination and medical history. While dealing with chronic illnesses, the doctor's ability to communicate with the patient provides not only the basis for diagnosis and treatment, but most importantly it is one of fundamental forms of therapy. As far as dementia patients are concerned, the diagnosis of non-cognitive behavioural disorders allows the treatment of mental symptoms and the modification of patients' behaviour. Such methods improve not only the contact with people affected by dementia, but also their ability to function in everyday life, thus reducing their caregivers' burden.

S t r e s z c z e n i e

Otępienie jest ważnym problemem zdrowotnym występującym w populacji osób w podeszłym wieku nie tylko wskutek zaburzenia wyższych funkcji korowych, ale również z powodu częstego występowania demencji, zwłaszcza w późniejszych dekadach życia. Na obraz kliniczny otępienia, poza zaburzeniem funkcji poznawczych, składają się pozapoznawcze objawy otępienia, do których należą zaburzenia zachowania oraz objawy psychotyczne i afektywne otępienia. Są one integralnym składnikiem choroby i występują u 64-90% chorych. Diagnostyka pozapoznawczych objawów otępienia stanowi istotny element procesu stawiania rozpoznania. Część z pozapoznawczych objawów otępienia można rozpoznać na podstawie obserwacji zachowań chorego. Należą do nich między innymi: niepokój, pobudzenie, wędrowanie, zbieractwo, zachowania kulturowo nieodpowiednie, odhamowanie seksualne, krzyczenie i zachowania agresywne. Rozpoznanie innych zaburzeń wymaga dokładniejszych badań i pogłębionego wywiadu chorobowego. Umiejętność komunikowania się lekarza z chorym stanowi nie tylko podstawę rozpoznania i leczenia choroby, ale w przypadku schorzeń o charakterze przewlekłym jest jedną z zasadniczych form terapii. W przypadku chorych z otępieniem, rozpoznanie pozapoznawczych zaburzeń zachowania pozwala na leczenie objawów psychicznych i modyfikację zachowania pacjentów. Działania takie istotnie poprawiają kontakt z osobami z otępieniem i ich zdolność do codziennego funkcjonowania oraz zmniejszają obciążenie ich opiekunów.

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## INTRODUCTION

Elderly patients pose considerable challenges for their medical caregivers. Such state of affairs stems from the specificity of afflictions of the elderly which, in turn, is caused by the accumulation of chronic diseases and the progressive dysfunction of both particular organs and the aging organism. Another reason why medical care of the elderly people proves to be more

difficult than of the other age groups, is the greater susceptibility to decompensation, resulting from acute illnesses as well as poor living conditions and, often, dramatically insufficient financial situation. Another distinct feature of older age is an increasing variability in the population of elderly people. This phenomenon results from the absence of strict correlation between the patients' chronological and biological ages, partly caused by the fact that the condition of an elderly person depends heavily on his/her socioeconomic status, living conditions and lifestyle. This shapes the disparities in both mental and physical health, as observed among elderly people, which pose significant challenges the medical staff has to overcome. It also applies to older patients afflicted by dementia, as the symptoms of dementia (due to the difficulty in separating the symptoms of the illness from the signs of aging) may be dismissed and downplayed as the natural effects of aging, thus making the diagnosis harder.

Dementia is an important health issue of the elderly, as it results in the disordered higher cerebral cortex functions – memory, thinking, orientation, understanding, counting, language functions, learning, planning and the ability to assess, all of which affect the lives of both the afflicted person and his/her caregivers. Moreover, the frequency at which dementia occurs is alarming, especially in the later stages of life; the percentage of the afflicted increases from 1% at the age of 65 to approximately 30-40% after the age of 90 (1, 2).

## NON-COGNITIVE SYMPTOMS OF DEMENTIA

Apart from the cognitive functions disorder, the clinical picture of dementia consists of non-cognitive symptoms, such as behavioral disorders, psychotic symptoms and affective disorders. They comprise an integral part of the illness and are present in 64-90% of dementia patients (3). The non-cognitive symptoms of dementia may develop before any indication of noticeable cognitive problems. Non-cognitive problems observed in the early phase of dementia manifest themselves by the tendency of the afflicted to start multiple tasks while not being able to complete them, and the lack of recognition and awareness of priorities – insignificant matters are treated on the same level of importance as the significant ones (4). Another problem occurring in this group of patients is psychomotoric agitation. It is described as an inadequate vocal or motoric activity, which does not provide any clear message, and does not arise from patients' needs (5). Emotional dysregulation, subdepression, major depression, euphoria, and mania are among the most frequently occurring affective disorders of dementia (3).

### Delusions and hallucinations

As for perceptual disorders, delusions and hallucinations are the most common. Delusions (false convictions) result from the erroneous interpretation of the reality. In certain cases, delusions are hard to identify, especially when it comes to elderly patient's delusions of being robbed by hired caregivers. Meanwhile, the diagnosis of such delusions as disorientation to place ("my home is not my home"), or the Capgras delusion ("my family and friends has been replaced by identical-looking impostors") is relatively easy. Patients experiencing "disorientation to place" type of delusions might start packing and trying to leave their homes either by entrance doors or even windows, while often exhibiting aggressive behavior towards people trying to stop them. Another type of delusion that can be observed in perceptual disorders are persecutory delusion, delusional jealousy, or a conviction that strangers invade the patient's home (3, 5). People suffering from dementia who are also subjected to coexisting delusions, are more likely to exhibit aggressive and hostile behavior than patients not affected by delusional disorders (6). A type of delusion often occurring in dementia with present Lewy bodies is a belief that the deceased relatives of a patient are still alive (7).

Hallucinations can be described as false exteroceptive sensations and observations appearing without an external stimulant. Dementia patients affected by hallucinations claim to see non-existing people or animals, or speak to non-existent characters. Other symptoms include patient's interactions with non-existing people or items (8). The prominent characteristic of patients suffering from hallucinations is their firm conviction of authenticity of experienced sensations, and the resulting resistance to any form of persuasion. Dementia with present Lewy bodies is signified by visual hallucinations representing colorful and realistic figures of humans and animals; inanimate objects are rare (9). Auditory hallucinations occur less frequently and usually accompany visual hallucinations. False beliefs resulting from objectively existing but mistakenly interpreted external stimuli are called misidentification. Instances of misidentification include recognizing the patient's own mirror reflection as an autonomous, separate being with which the patient engages in conversation, or treating people appearing on TV as real persons and talking or even arguing with them (10).

### Psychomotoric agitation

A common non-cognitive symptom of dementia is psychomotoric agitation, which may manifest itself by non-aggressive or aggressive behavior, and vocal agitation. Non-aggressive agitation symptoms include: general uneasiness, lack of cooperation, recurring manierisms, sleep disorders (insomnia or sleep deprivation), inappropriate usage of items, restlessness and wandering away. Symptoms of verbal agitation include: excessive verbosity, repetition of the same questions in a short span of time, verbal negativism, craving attention, complaining and screaming. Aggressive agitation symptoms include: destroying objects, cursing, spitting, pushing, scratching, biting, kicking and beating. Moreover, increased tension and angst may also be symptoms of psychomotoric agitation (11).

**Negative behavioral disorders**

Patients suffering from the Alzheimer's type of dementia (the most common type) frequently exhibit negative behavioral disorders, which lead to difficulties in the transition from thought to action. These disturbances evince themselves by indifference, negligence of one's appearance, disorganization, passiveness, obstinacy, lack of attention, emotional shallowness, apathy, and logopenia – characterized by the patients' evident word choice problems; however, both the length and syntax of produced sentences remain unaffected. Another symptom of negative behavioral disturbances occurring in the Alzheimer's type of dementia is apraxia of speech. As a disorder which impairs the ability to perform already acquired skills, apraxia of speech causes difficulties with initiating and executing any motions needed to properly aritculate. It is characterized by a flat intonation and slow articulation which requires a lot of effort. Other disturbances include imprecision of articulation, distorted motor patterns of words, as well as adding or dropping syllables in speech.

**Positive behavioral disorders**

Positive behavioral disorders, in which there is no difficulty in transition from thought to action, while the actions themselves are disturbed by the lack of control over emotions, are observed less frequently in patients with the Alzheimer's type of dementia. The most commonly occurring positive behavioral disorders include oversensitivity, anxiety, impulsiveness, irritation, inappropriate behavior and perseveration. Aggression, also regarded as positive disorder, occurs less frequently, although it is still common among dementia patients. Aggressive behaviors encompass swearing, tearing items apart, spitting, pushing, scratching, kicking, biting and beating (3). Agitation, angst, and irritability may manifest themselves by aggressive behaviors and comprise the most frequent, apart from apathy, psychopatological symptoms occurring in the Alzheimer's type of dementia (12). Aggressive behavior observed in dementia patients may be linked to the situations either too encumbering for them (exceeding their abilities), or those which purpose can no longer be comprehended, such as the need to change clothes, bathe or comb hair. Trying to stop the patient from performing such specific actions, as undressing, urinating or defecating in the presence of others, or inappropriate gestures, may also spark an aggressive response. Another significant issue is the growing disturbance in communication with the patient, leaving him/her unable to establish any satisfying contact or an exchange of thoughts. Inability to understand the intended meaning of a message develops anxiety and tension in patients and may lead them to exhibit aggressive behaviors. In other cases, the increasing disorganization and indifference brings patients to withdraw from interpersonal contacts, and intensifies the passivity and apathy.

The number of behavioural disorders grows with the progression of the illness, while the highest intensity of symptoms can be observed among the patients with negative behavioural disorders, especially those which manifest themselves by passivity, obstinacy, neglect of one's appearance, attention disorders, apathy and disorganization of behavior. As for the positive behavioral disorders, the intensification occurs among such symptoms as impulsiveness, anxiety, oversensitivity and perseveration (3).

**FRONTOTEMPORAL DEMENTIA**

Behavioral disorders occurring in the frontotemporal dementia are characterized by early neglect of one's appearance, easily loosing attention, disturbed social behavior manifesting itself by lack of tact, and such socially unacceptable behaviors as theft, symptoms of disinhibition with, among others, inappropriate sexual behavior and violent behaviors. Other behavioral disorders of frontotemporal dementia include gluttony, excessive alcohol intake and tobacco smoking, as well as oral exploration of items – all of these actions are classified as hiperorality. Stereotypical behaviors such as manierisms (singing, dancing, clapping, numerous repetition of simple gestures) and complex rituals (dressing, washing, folding clothes) are common among these patients. They also exhibit utilitary behaviors, including inspecting, touching and, often inappropriately, using every item in vicinity, or even destroying them. Beside increased activity, such symptoms as decreased drive, lack of spontaneity, as well as inertia may occur. As far as the emotional domain is concerned, the shallowness of mental state is a dominating issue, with such symptoms as inability to express emotions and lack of emotional engagement in private and other people's affairs; depression and angst also occur (5, 13).

**VASCULAR DEMENTIA**

Symptoms which develop in vascular dementia include emotional disorders, depressive disorders, and angst. Cognitive deficits are distributed unevenly, with noticeable influence on some functions and relative lack of effect on others. The course of illness is characterized by long periods of stability and sudden, major aggravations in cognitive and functional state. The non-cognitive symptoms of vascular dementia develop gradually, often starting with loss of interests, low activity, and a decrease in thought process. In the case of subcortical vascular dementia, patients lose their ability to make plans, initiate deliberate actions, as well as perform abstract thinking. Personality disorders, emotional lability and depression add to the whole picture. In mutli-infarct type of dementia, the symptoms are connected to the place of brain damage. When the frontal lobes, or their connections to other parts of the brain are affected, the dominant symptoms include behavioral and personality disorders, occurring with disinhibition, lack of criticism, emotional lability, low mood, and apathy. Slow thinking is frequently observed. Symptoms of depression can occur in the

cases in which lower parts of the frontal lobes are damaged, leading to disturbances in behavior and executive functioning. Such patients suffer from impaired mental activity and decreased ability to determine a goal, as well as to plan, initiate and perform a task, or verify their actions (14, 15).

## DIAGNOSIS

Since the non-cognitive symptoms of dementia comprise an important part of dementive process, ability to notice their presence is a step in the way to stating a diagnosis. Some of the non-cognitive symptoms of dementia can be recognized on the basis of the observation of the patient (16). Among others, these symptoms include anxiety, agitation, wandering around, hoarding, socially unaccepted behaviors, sexual disinhibition, shouting and aggressive behaviors. The diagnosis of other disorders require more detailed examination and medical history. This pertains to such symptoms as depression, angst, not recognizing people, as well as delusions and hallucinations (3). While observing the patient, as well as performing a detailed examination and medical history, we use the knowledge gained by means of direct contact with the patient. Sitting on the edge of a chair usually points to interest and willingness to perform actions such as being subjected to an examination. Sitting with the ankles together, however, indicates an internal tension and huge stress. It is usually a signal that patient expects assistance in his or her situation, which he or she regards as tough. Observing the movements of arms and hands allows us to read involuntary signals denoting what emotional state the patient is in. According to the general rule, if during the conversation with the patient, his or her arm movements are particularly visible, it signals the patient's anxiety and the need to calm down. An anxious and insecure person exhibits continuous arm movements, such as entwining and disentwining hands, drumming on the table with fingers, plays with various objects or plucks invisible threads. Tightly entwined hands, as well as twisting hands is an evidence of an internal tension. On the contrary to those dynamic positions, crossed arms may signify distance or the so-called "closed" position (usually brought on by the need of defense), especially in contact with people who are strangers to the patient. Among numerous gestures that signal frustration, it is worth to pay attention, when the patient grips the edge of a desk or table, his/her arms spread. Such behavior, similarly to sitting with the head lowered and a hand placed on one's occiput, expresses the need to draw attention. Pulling one's earlobe may also signify the need of attention as well as the desire to have a break in the conversation. Observing the patient's manner of walking, the stride length, the posture, is a helpful source of information which reveals the patient's general vitality and the types of emotions influencing his/her behavior. An elderly person who shuffles his/her feet and has his/her head down while walking usually demonstrates the besetting despondency. Moreover, the sounds produced by patients provide information. Apart from the typical "phew" indicating relief, a repeated throat clearing may express uneasiness (17).

While dealing with elderly people, it is essential to behave in a manner that will not only result in better understanding of the conveyed information, but also improve the mutual comfort. An effective way of improving the communication is to make sure that both the patient's and the doctor's faces are well-lit by a source of diffused light with proper intensity, bearing in mind that it should not be blinding. This allows the people involved in the conversation to see each other's facial expressions, thus facilitating the understanding of non verbal messages and improving the verbal communication, since it is often the case that elderly, often hearing-impaired people may try to read inaudible words by observing the movement of doctor's lips. Another important issue is the physical distance during a conversation with an elderly patient. In most cases this distance should be close enough to be deemed too close by a doctor. This stems from the elderly persons' need to get the doctor's full attention and focus on the patient's issues, which is facilitated by the close contact, sometimes resulting in holding hands. Another method of improving the communication with patients of any age is the sitting position of the interlocutors. The meaning of seating as an activity increases in inverse proportion to the amount of time dedicated for the contact with others – the less time we can devote to the patient, the more matters the fact that we invited him or her to sit for the time of conversation. This rule is crucial especially in the situation in which the vast majority of elderly people consider the time spent in the doctor's office not to be nearly enough to suit their needs. Moreover, outside of providing good conditions for proper eye contact, the sitting position of both interlocutors emphasizes their equal status and neutralizes the sense of rush and impatience (18, 19).

## CONCLUSIONS

The examples provided above present the usefulness of applying certain methods meant to facilitate the contact with an elderly person, as well the validity of developing the skills in observation and analysis of patients' behavior. This principle pertains especially to people affected by chronic illnesses, such as dementia. While dealing with chronic illnesses, the doctor's ability to communicate with the patient provides not only the basis for diagnosis and treatment, but most importantly it is one of fundamental forms of therapy (20). As far as dementia patients are concerned, the diagnosis of non-cognitive behavioral disorders allows the treatment of mental symptoms and the modification of patients' behavior. Such methods improve not only the contact with people affected by dementia, but also their ability to function in everyday life, thus reducing their caregivers' burden.

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