Review article

Alexithymia for cardiologists: a clinical approach to the patient

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Alexithymia literally meaning 'no words for emotions' is a term used in mental health settings to describe people who have difficulties in identifying and verbalizing their emotional states.

There is evidence in the literature that this personality trait may influence negatively the illness behavior when an acute coronary event occurs. In fact, people with high alexithymia are more likely to experience wrong appraisal and interpretation of symptoms, and because of their difficulty in describing feelings to others, they can be poor in reporting symptoms at the first consultation with a physician. This behavioral pattern (alexithymic) may put patients with acute myocardial infarction at higher risk for delayed medical care. Here, we aim to present an overview of alexithymia from the perspective of the clinical cardiologist, with a focus on the definition, clinical recognition, and potential impact on cardiovascular health.

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Introduction

The symptoms of acute myocardial infarction (AMI) are well described in Medicine textbooks, but the way people respond to bodily indications during an acute illness, such as a heart attack, is different for everyone. This 'illness behavior' includes how patients define and interpret their symptoms, take remedial actions and utilize the healthcare resources.[1]

Although the patient's decision to call for help is a complex and challenging phenomenon, it depends primarily on the ability of an individual to correctly recognize the somatic side of feelings. Thus, symptom perception that an acute coronary event is occurring or that something is being wrong is critical for timely reperfusion and clinical outcomes in AMI patients.[2,3] This ability is impaired in people with a specific cognitive deficit in recognizing and mentalizing emotions called alexithymia,[4,5] thus putting patients with AMI at risk of delayed seeking care.[6]

The purpose of this article is to provide a current vision of alexithymia from the perspective of the clinical cardiologist, with a focus on the definition, meaning, a clue to early clinical recognition, and potential implications for cardiovascular health.

What is alexithymia?

Alexithymia is not a mental health disorder, rather it is viewed as a cluster of cognitive and affective deficits that were first described in a sample of patients with psychosomatic illness,[7] which may be recognized during the medical interview by focusing on the person's language, way of thinking, behaviors, and nonverbal signals as well. Therefore, the assessment of the alexithymic trait requires clinicians to investigate the personality of the individuals. The key components of the alexithymia construct constitute difficulty identifying one's own feelings and distinguishing between feelings and bodily sensations, difficulty describing and communicating feelings to others, externally oriented thinking, and limited imaginative capacity with scarce fantasy.[5,8]

Alexithymia evaluation among patients with a recent acute myocardial infarction

Cardiologists are often faced with patients hospitalized for AMI who manifest difficulties in relating their experiences and emotions. Such patients may present high levels of alexithymia.

'How do you feel? I do not know how I feel'

When asked about their symptoms, AMI patients with high alexithymia unexpectedly have trouble answering properly, as they are unable to recognize and express to others what they are feeling (difficulty identifying and describing feelings). People with high alexithymia typically know that they do not feel good, but do not know how to say or describe what they are feeling. The term alexithymia, introduced by Sifneos in the early 1970s, literally means 'having no words for feelings' and refers to patients who do not find appropriate words to describe

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their emotions, one of the facets of the alexithymic construct (from Greek, 'alfa', lack; 'lexis', word; 'thymos', emotion).[4]

When a person presents high levels of alexithymia, signals from internal organs are not processed by the brain in the usual way in order to generate specific feelings and resultant adaptive actions, indicating a deficit in recognizing, processing, and regulating emotions. He/she does not repress or hinder or deny emotions: he/she does not recognize them. Therefore, people with high alexithymia experience physical signals but have no idea where they have come from. During the medical recall, they appear confused and disconnected from what has happened, try to express their emotional state by using somatic descriptions, or report impulsive and dysregulated actions rather than describe their internal experience.

As a result of struggling to identify and express emotions verbally, people with high alexithymia tend to focus on events from the outside world, and less on their own internal states (externally oriented thinking style). This propensity to show a concrete way of thinking comes out over the course of their medical history: when talking about what has happened, the patients dwell on minute details regarding events of their lives, focus on external factors as causative for their symptoms, while omitting what they feel inside.[9,10] The paucity of imagination and creativity is another clue of the alexithymic trait, which leads the patients to adopt preferentially an externally oriented thinking style.

When gathering information on patients with acute coronary symptoms, observing their nonverbal communication such as gesturing and facial expressions is an important step to detect alexithymia features. In people with high alexithymia, gesturing is poor, and the facial expression may be typically blank, which would mean 'I have no emotional message for you'. This nonverbal inexpressiveness is more evident in patients with higher difficulty identifying feelings.[11] For this reason, taking the medical history of a patient with high alexithymia may be inconclusive for the clinician, as the general impression is that the 'patient has no story to tell'.[12]

Instruments to identify and measure alexithymia

The suspicion of high alexithymia arises initially from clinical observations and requires to be confirmed by specific tools, which have been developed in the mental health field, along with expert judgment. Currently, the 20-item Toronto Alexithymia Scale (TAS-20)[8,13] is the most widely used instrument to identify and measure the severity of alexithymia in various clinical settings, including cardiovascular medicine. It is a self-report questionnaire that evaluates three dimensions of alexithymia: difficulty identifying own's emotions, difficulty communicating emotions to others, and externally oriented thinking. Each of the 20 item-scale is rated by a 5-point Likert scale, whereby 1 = strongly disagree and 5 = strongly agree. Four scores can be obtained from the questionnaire: one for each factor and one total score. Although alexithymia should be viewed as a continuous personality trait with varying degrees of expression, a total score at least 61 indicates a high level of alexithymia, a score less than 51 indicates low alexithymia, while an intermediate score indicates a medium level of alexithymia.[8,13]

As a high level of alexithymia means having difficulty identifying one's own feelings, persons with high alexithymia usually do not realize they have this issue, and they do not seek medical care consequently. By using TAS-20, population studies show the prevalence of high alexithymia to be around 10–13%.[14–16] However, the alexithymic features have been found to be more common in specific medical settings such as AMI (28%, 38%) and various mental disorders (21.3%), especially depression (26.9%).[6,17,18]

Alexithymia and cardiovascular health

High levels of alexithymia may contribute to poor health by fostering negative behaviors. This may be the consequence of poor regulation of emotions as well as the reduced perception of one's internal state, such as hunger and satiety. High levels of alexithymia have been associated with a more sedentary lifestyle, a greater BMI, eating disorders, and increasing use of alcohol and other substances.[9] Such unhealthy behaviors may act as risk factors for cardiovascular diseases and may explain the association between high alexithymia and premature death.

Nevertheless, in a 20-year-longitudinal study on 2321 middle-aged men, high alexithymia was found to be a risk factor for death, independent of other behavioral, biological, and psychosocial factors. The risk of cardiovascular death increased by 1.2% for each 1-point increase in alexithymia TAS scores.[19] Interestingly, a Finnish study in a cohort of 1222 participants, exploring the association of cardiovascular health in adolescence and young adulthood with high alexithymia 25 years later, found that unhealthy eating habits were significantly linked with later high alexithymia in the multivariate analyses. The link was mainly related to the main feature of alexithymia, which is difficulty in identifying and describing feelings.[20]

Recently, in a 10-year-longitudinal study among a cohort of 83 people with ST-segment elevation myocardial infarction (STEMI), was found that high alexithymia was a significant determinant of early death in the long term after STEMI [Log Rank Mantel-Cox = 6.899, 1 *df*, $P = 0.009$; RR = 5.75; 95% confidence interval (CI) 1.116–29.637] without any differences regarding age, sex, high alexithymia between individuals on whom it was possible to verify the state in life and in whom it was

not.[21] These data are hypothesis-generating, and more research is needed to establish the relation between high levels of alexithymia and death in people with prior AMI.

There is also evidence that a high level of alexithymia is independently associated with hypertension and subclinical carotid atherosclerosis in the general population.[22,23] In addition, earlier studies on small samples of hypertensive patients have observed that high alexithymia is more prevalent in hypertensive patients as compared with their controls.[24,25] Although the role of the high level of alexithymia as a risk factor for elevated blood pressure remains unclear, the vulnerability to hypertension because of the difficulty of coping with stress with a resultant persisting increase in adrenergic activity may be a possible mechanism.[24]

Although not specifically addressed in cardiac patients, nonadherence to treatment with cardiovascular drugs could cause major collateral damage driven by higher levels of alexithymia with a negative influence on cardiovascular outcomes. The impaired introspection and the way of thinking focused on external events may explain why individuals with high alexithymia face hardly the tasks of taking regular care of themselves and complying with prescribed treatments.[26]

Alexithymia and healthcare utilization

As people with high alexithymia are more likely to experience wrong appraisal and perception of bodily sensations (emotions), and because of their difficulty in describing feelings (mental representation of emotions) to others, they can be late in seeking urgent medical help and poor in reporting symptoms at the first consultation with a physician. In that regard, there is growing evidence that low emotional and somatic awareness associated with alexithymic trait influences substantially the care-seeking behaviors of patients with acute ST-elevation myocardial infarction (STEMI).[3,6,27–31]

Previous studies assessing patients with STEMI treated with primary angioplasty after they were discharged from the cardiac intensive care unit pointed out, that high alexithymia influences patient responsiveness to cardiac symptoms, thus leading to a longer delay in calling for medical help. STEMI patients with a longer duration of prehospital delay (time to presentation $\geq$2 h) had higher alexithymia scores (TAS-20 $\geq$ 61) in comparison to early presenters (time to presentation $\leq$2 h).[27] When compared with controls, STEMI patients with high alexithymia waited more often for symptoms to go away (51.9 vs. 19.4%, $P = 0.002$), appraise symptoms as not being serious enough (51.9 vs. 23.5%, $P = 0.008$), and less often they had a correct attribution of symptom origin (40.7 vs. 62.7%, $P = 0.052$) or a fear of dying (33.3 vs. 63.2%, $P = 0.006$).[6]

Although primary alexithymia would be the consequence of a developmental trauma or early life stress, when the ego has still not been able to use defenses, such as repression or denial to moderate its impact (i.e. before the affects have been desomatized, differentiated and verbally represented), secondary alexithymia would arise not during development, but as a consequence of events occurring later in life (i.e. a somatic illness),[32–36] that can cause affects' regression to a preconceptual level.[32–36] Secondary alexithymia, which arose after a psychologically significant event, may work as a defense behavior against highly emotional events.[32–36] Interestingly, people with AMI were found to develop high levels of alexithymia within 3–6 months after discharge, with low temporal stability, suggesting that secondary alexithymia could rise even after AMI.[17] This is an intriguing finding as alexithymia may clarify the apparent paradox that patients with previous AMI delay in responding to their symptoms more than patients with a first AMI.[37]

In summary, the concept of alexithymia has extended beyond the field of psychosomatics to include several branches of medicine through an interdisciplinary approach. There is now a voluminous literature on alexithymia in medical settings,[9,38] and it should be viewed as a novel behavioral entity in Cardiology for the potential to negatively impact cardiovascular health. This condition should be considered among the psychological factors able to affect the patient's delay in seeking help during an acute illness, such as AMI. Hospitalization for AMI affords clinicians an opportunity to recognize the main features of the alexithymic trait by giving attention to how patients express what they have experienced following the onset of the acute event: the lack of emotional response to the bodily signals is a key aspect of this condition. At the onset of AMI, high alexithymia may blur the symptom perception and inhibit prompt access to primary angioplasty, while in the postinfarction phase, it may put the patients at risk of nonadherence to life-saving drugs and other unhealthy behaviors.

As psychotherapy assumes that individuals have some access to their feelings, people with high alexithymia, showing serious difficulties in describing their emotional states, often are a great challenge for psychotherapists. For that reason, in the specific context of a cardiovascular rehabilitation activity, the measurement of the alexithymia levels among AMI patients would give the possibility of planning tailored psychoeducational interventions aimed at improving the emotional and somatic awareness, the ability to recognize feelings and symptoms, to verbally communicate them and ask for help properly.

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Conflicts of interest

There are no conflicts of interest.

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