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Alexithymia in Systemic Lupus Erythematosus: A Tight Relation with Mood States

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Abstract

The difficulty in identifying, differentiating and expressing emotions is a neuropsychological condition called alexithymia. During the last years it has grown the interest of scientific community for alexithymia, in particular in chronic conditions. Crescent literature data demonstrated that a considerable number of SLE patients present difficulty not only in identifying, differentiating, and articulating emotions but also in differentiating them from bodily sensations, configuring the alexithymia complaint. Alexithymia seems to be not related to SLE disease activity but tightly related to mood states. Identify proper pharmacological and psychological approach to alexithymia in SLE patients is a major challenge for future research.

Keywords: Alexithymia; SLE; Mood disorders; Pain

Introduction

Alexithymia describes the difficulty of people in identifying, differentiating, and articulating emotions of others and themselves and in discriminating those from bodily sensations, with a limited fantasy and a concrete, externally oriented cognitive style [1-3]. Sifneos described alexithymia construct in 1973 in relation to classic psychosomatic diseases and failure to respond to dynamic psychotherapy [1]. Actually alexithymia is defined by cognitive and affective characteristics comprising: difficulty identifying feelings and distinguishing between feelings and the bodily sensations of emotional arousal; difficulty describing feelings to others; a restricted imagination, as evidenced by a paucity of fantasies; a cognitive style that is literal, utilitarian, and externally oriented [2,3]. Numerous studies revealed positive associations between alexithymia and pain intensity and sensitivity [4]. Moreover, it has been demonstrated a strong relationship between alexithymia and depression. A recent meta-analysis of 19 studies showed that alexithymia and in particular difficulty identifying feelings and difficulty describing feelings are closely related to depression [5]. Finally, pain and depression often coexist, and this coexistence could be associated to alexithymia complaint, possibly since pain and depression share pathophysiologic mechanisms as neuroendocrine dysfunction and inflammatory states [6]. In population based study on mental health inflammatory markers interleukin-6 (IL-6) and C-reactive protein (CRP) were hyper expressed in alexithymia subjects and in a multivariate analysis CRP increased the likelihood of belonging to alexithymia group [7]. The relationship between alexithymia, depression, pain and inflammation increased the interest in the field of rheumatic diseases.

Cognitive and Emotional Impairment in SLE

Systemic Lupus Erythematosus (SLE) is an autoimmune disease with a wide spectrum of manifestations, including involvement of central and/or peripheral nervous system leading to a complex syndrome called Neuropsychiatric SLE (NP-SLE). The definition of NP-SLE is challenging because of the variety of clinical complaints that it encompasses, most of which are non-specific (for example cognitive impairment). Moreover, NP-SLE spectrum also comprises mood disorders, anxiety disorders and psychosis [8,9]. SLE patients have a high prevalence of cognitive dysfunction with impairment in attention and concentration, working memory, visuospatial skills, and memory. However, the causes of cognitive disorders in SLE can be multifactorial, including direct effects of disease mechanisms on the central nervous system, but also the coexistence of depression, anxiety, comorbidity and side effects of drugs [10]. Several studies showed a higher degree of depression and lower total quality of life score in SLE patients compared to healthy controls. In particular Choi et al. demonstrated a significant reduction of physical well-being and emotional well-being in SLE in relation with depression and fatigue and with lupus disease features as fatigue, daily glucocorticoid dosage, disease activity and disease damage [11]. Several studies reported disturbances in emotional regulation in SLE, evidencing increased emotional lability. Langosch, et al. found that about half of SLE subjects exhibited emotional lability that was unrelated to disease duration, medication, or psychiatric variables as depression and anxiety. Moreover in a clinical electrophysiological study emotional lability are more responsive to external stimuli, suggesting that emotion lability in SLE may be due to increased sensitivity to external stimuli [12-14]. In SLE, alexithymia fits into this overall context that includes psychoses, mood disorders, cognitive impairment and emotional lability.

Alexithymia in SLE

In SLE studies alexithymia was evaluated by the Toronto Alexithymia scale (TAS-20), a self-measuring questionnaire constituted by 20 items. TAS-20 differentiates subjects in alexithymia and non-alexithymia and identifies three alexithymia profiles: difficulty identifying feeling (TAS1), difficulty describing feeling (TAS2) and externally oriented thinking (TAS3).

In a preliminary study we firstly demonstrated a significant prevalence of alexithymia, affecting 42% of SLE patients. We further investigated the possible relation between alexithymia, inflammation and neuro-endocrine dysregulation, assessing serum levels of prolactin (PRL), human growth hormone (hGH), interleukin-6 (IL-6) and tumour necrosis factor alpha (TNF-alpha. In SLE patients with alexithymia we found hyper-expression of PRL compared to non-alexithymia ones, however, there were no difference in the expression of inflammatory markers [15].

In a second extended study we explored the impact of mood state and pain experience on alexithymia. We used Rheumatoid Arthritis (RA) as comparator condition and we found that RA patients present higher degree of pain than in SLE. Anyhow, SLE patients showed increased value of the POEMS scale including profile of mood states as anger-hostility, confusion, depression, tension-anxiety, fatigue, vigour. Interestingly, the prevalent mood profile in SLE was confusion. Moreover, in SLE patients we found a positive correlation between alexithymia score and profile of mood stated scale, whereas alexithymia and pain were not related [16].

The group of Barbosa has greatly contributed to the research on the field of alexithymia in SLE. Barbosa et al. demonstrated a high prevalence of alexithymia in SLE in relation to mood and anxiety disorders, personality and quality of life. In particular, these authors showed that openness and depression were predictors for alexithymia in SLE. In a study on 53 SLE, Barbosa et al described a positive correlation between alexithymia and psychopathological symptoms as depression, anxiety, psychoticism, neuroticism and a negative correlation with quality of life domains as pain, vitality and general health perception. The authors did not find any relationship between alexithymia and SLE disease parameters as disease activity or damage [17-19].

Barbasio, et al. investigated the impact of mental representations of attachment and emotion regulation on alexithymia, using the Adult Attachment Interview. They demonstrated that adult attachment in patients with SLE influenced the presence of alexithymia features [20]. In a recent study of Barbasio, et al. there was no relation between alexithymia, depression and SLE disease activity index and damage index [21].

We summarized in Table 1 the findings concerning alexithymia in SLE.

Author	Findings	TAS-20 value	References
Vadacca M, et al.	High prevalence of alexithymia in SLE. Hyper expression of prolactin in alexithymia SLE subjects	Mean TAS-20 score in SLE: 46 Percentage of SLE patients with TAS-20 score >50: 42%	[15]
Vadacca M, et al.	High prevalence of alexithymia in SLE in relation with profiles of mood states	Mean TAS-20 score in SLE: 51 Percentage of SLE patients with TAS-20 score >61: 37%	[16]
Barbosa F, et al.	High prevalence of alexithymia in SLE in association with psychopathology, personality and quality of life dimensions.	Percentage of SLE patients with TAS-20 score >61: 51%	[17]
Barbosa F, et al.	positive correlation between alexithymia and psychopathological symptoms as depression, anxiety, psychoticism, neuroticism and a negative correlation with quality of life domains as pain, vitality and general health perception.	TAS-20 total score not statistically different between SLE and chronic urticarial. TAS-20 score higher in SLE compared to healthy controls.	[18]
Barbosa F, et al.	Association of alexithymia with psychological distress and with quality of life impairment.	Percentage of SLE patients with TAS-20 score >61: 51%, compared to asthma: 34%	[19]
Barbasio C, et al.	Adult attachment in patients with SLE influences the presence of alexithymia features		[20]
Barbasio C, et al.	Significant relation between alexithymia and illness perception in SLE	Mean TAS-20 score in SLE: 50	[21]

Table 1: Main findings concerning Alexithymia in SLE.

In conclusion, crescent literature data demonstrated that a considerable number of SLE patients present difficulty not only in identifying, differentiating, and articulating emotions but also in differentiating them from bodily sensations, configuring the alexithymia complaint. Alexithymia seems to be not related to SLE disease activity but tightly related to mood states. This relation maybe leads to a vicious circle where the difficult in identify and express feeling could intensify bodily pain perception, promoting negative mood states as hostility, confusion, anxiety and fatigue. Identify proper pharmacological and psychological approach to break this vicious circle is a major challenge for future research.

The increase of prolactin serum levels in alexithymia SLE subjects suggests a possible neuro-endrocrine basis of alexithymia in SLE, opening the way for further studies.

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