Endokrynologia Polska/Polish Journal of Endocrinology
Tom/Volume 61; Numer/Number 1/2010
ISSN 0423–104X

Emotions and features of temperament in patients with Addison's disease

Emocje i cechy temperamentu u pacjentów z chorobą Addisona

Izabela Warmuz-Stangierska, Daria Baszko-Błaszyk[1], Jerzy Sowiński

Department of Endocrinology, Metabolism, and Internal Medicine, University of Medical Sciences, Poznań, Poland

Abstract

Introduction: Patients with Addison's disease experience many somatic and psychic changes, which decrease their quality of life. The aim of the study was to evaluate the "psychological equipment" of these patients to cope with stress connected with this chronic disease and the challenge of constant treatment.
Material and methods: Fifteen patients (13 female, 2 male) were included in the study. Standard psychological tests were used to assess anxiety, temperament, depression, and emotional intelligence.
Results: The results show that patients with Addison's disease have not only increased levels of anxiety and fear, and over-reaction to stimuli, but decreased performance efficiency and need for social contact as well. Such psychological characteristics may result in difficulties in doctor-patient communication, aggravation of patients' feelings, limitation of patients' involvement in therapy, and, finally, a decrease the effectiveness of therapy.
Conclusions: The temperamental characteristics and personal traits of patients with Addison's disease seem not to be useful in stressful events, and psychological support can be helpful in the effective therapy of these patients. **(Pol J Endocrinol 2010; 61 (1): 90–92)**

Key words: *Addison's disease, anxiety, temperament, depression, emotional intelligence*

Streszczenie

Wstęp: Pacjenci z chorobą Addisona doświadczają wielu zmian somatycznych i psychicznych, które pogarszają jakość życia. Celem badania była ocena „wyposażenia psychologicznego" tych pacjentów, które jest przydatne w radzeniu sobie ze stresem związanym z przewlekłą chorobą i koniecznością stałego leczenia.
Materiał i metody: Do badania włączono 15 pacjentów (13 kobiet, 2 mężczyzn). Zastosowano standardowe testy psychologiczne do oceny natężenia niepokoju, temperamentu, depresji i inteligencji emocjonalnej.
Wyniki: Wyniki badań wykazują, że pacjenci z chorobą Addisona mają nie tylko podwyższony poziom niepokoju, lęku i nadmierną reaktywność na bodźce, ale także obniżoną wydolność i potrzeby kontaktów towarzyskich. Takie cechy psychologiczne mogą być odpowiedzialne za trudności w relacjach lekarz–pacjent, wyolbrzymianie dolegliwości, zmniejszone zaangażowanie w proces leczenia, a w konsekwencji zmniejszoną skuteczność terapii.
Wnioski: Emocje i cechy temperamentu pacjentów z chorobą Addisona wydają się być niekorzystne w sytuacjach stresowych, a zatem wsparcie psychologiczne może być przydatne w skutecznej terapii tych pacjentów. **(Endokrynol Pol 2010; 61 (1): 90–92)**

Słowa kluczowe: *Choroba Addisona, temperament, depresja, inteligencja emocjonalna*

Introduction

Adrenal insufficiency (Addison's disease) is a rare disorder. Its incidence is assessed as approximately 35 to 120 cases per million individuals [1, 2]. Symptoms depend on the degree of glucocorticoid, mineralocorticoid, and androgen deficiency, the level of stress, and the coexistence of other diseases.

Diagnosis is easy in the symptomatic period of the disease, but it is very difficult in the initial phase. At onset, symptoms are not specific: generalized weakness, chronic malaise, lassitude, fatigue, vertigo, orthostatic hypotension, anorexia, weight loss, preferential consumption of salty meals, and muscle and joint pain. Women complain of decreased libido, menstrual irregularities, and diminished axillary and pubic hair [1, 2].

Patients may be irritated and downhearted, changes in mood and behaviour such as depression, increased nervousness, emotional instability, or decreased psychomotoric drive can occur. Few patients present psychiatric manifestations such as psycho-organic, depressive, or paranoid syndromes that usually improve

Daria Baszko-Błaszyk M.D., Department of Endocrinology, Metabolism, and Internal Diseases, Poznań University of Medical Sciences, Przybyszewski St. 49, 60–355 Poznań, tel.: +48 61 869 13 30, fax: +48 61 869 17 82, e-mail: dbblaszyk@am.poznan.pl

Table I. *Patient results obtained in different psychological tests*

Tabela I. *Wyniki pacjentów uzyskane w różnych testach psychologicznych*

No of pt	X1 (anxiety — state)	X2 (anxiety — trait)	Depression Raw results	INTE		Neuroticism	Fear	Anger	Activity	Sociability
				Raw results	Stens					
1	43	46	30	129	6	4	4	9	5	5
2	60	55	21	98	2	7	7	7	4	5
3	38	38	5	130	6	10	7	4	5	3
4	42	50	20	127	5	5	6	7	5	4
5	31	39	32	150	9	3	4	2	5	1
6	30	41	9	109	4	8	9	10	5	4
7	50	60	31	127	5	6	6	6	8	10
8	36	36	9	120	4	5	7	3	4	3
9	45	48	21	118	4	9	6	4	6	9
10	49	52	29	110	3	8	7	10	5	5
11	38	45	27	112	3	4	8	8	6	6
12	46	56	12	121	4	7	10	5	4	4
13	50	59	21	118	4	8	9	10	3	4
14	34	44	22	97	1	7	8	7	2	2
15	46	54	30	112	3	9	7	3	3	3
Mean values	42.5	48.4	22.6			6.6	7.06	6.2	4.5	4.5

after introducing the treatment. Sporadically, the first manifestation may be adrenal crisis [3].

Soon after diagnosis and the start of life-long treatment, many patients live normal active lives. Patient education and cooperation with the endocrinologist is crucial. Patients should be aware of the symptoms of adrenal crisis, the influence of stress, infection, surgery, or trauma in the course of the disease and the necessary adjustments of the treatment in these situations.

Manifestations of Addison's disease and the constant involvement of patients in the management cause tremendous psychic tension and require endurance and responsibility. The aim of the study was to evaluate the "psychological equipment" of patients with Addison's disease to cope with the stress connected with this chronic disease and the challenge of constant treatment.

Material and methods

The study was carried out between 2004 and 2006. Fifteen patients (13 female, 2 male) were included in the study. All procedures were carried out with adequate understanding and written consent from the examined patients. The mean age was 34 years (range 20–49). The patients' education was as follows: elementary — 3pts, secondary — 9 pts, and higher — 3 pts. In all patients included in the study, the diagnosis of Addison's disease was made at least a few months before admission to hospital. Patients who were admitted because of adrenal crisis were excluded from the study. In an initial interview, psychiatric diseases or traumatic events were excluded. The assessment of psychological functions was based upon the analysis of the personality traits useful in stress and trauma management, such as temperamental features, anxiety, depression, and emotional intelligence. Temper questionnaires, EASA (Emotionality, Activity, Sociability for Adult), by Buss and Plomin [4], STAI (State-Trait Anxiety Inventory for Adults [5] and Beck Depression Inventory (BDI), were used. The BDI is a 21-item self-report rating inventory measuring characteristic attitudes and symptoms of depression.

Results

The results obtained by the examined patients are presented in Table I.

Anxiety has two meanings in psychology. It can be regarded as a state and as a trait; hence separate analysis of these two features was carried out. Increased anxiety (as a state) and normal levels of anxiety (as a trait) in STAI scores were observed.

Temperamental evaluation (EASA test) of emotionality showed normal results in the distress and anger sphere, increased fear, diminished activity (persistence, speed, and intensity of reaction), and low sociability (social tendency and sensibility).

Average score levels of depression obtained in Beck Depression Inventory showed moderate to severe depression (scores: 19–29).

Emotional Intelligence Quotient, i.e. the ability to use emotions in order to solve problems, was medium in 8, low in 6, and high in 1 patient/s.

Discussion

Any disease, for the majority of patients, constitutes a personal and emotional problem influencing and disarranging their whole life; it simply means stress. Stress is a complex combination of mental, emotional, and physical responses to the environment. Mild or moderate stress is stimulated by action and the achievement of goals, while severe, overwhelming stress takes a negative effect. The means of stress management depends on many factors. Personality traits seem to be the most important. Personality is defined as the consistent emotional thought and behaviour patterns in a person. The type of personality indicates how a person is likely to deal with different situations and in which environment they feel most comfortable. Some traits of personality are more helpful in traumatic events, while others are less so. Temperament is another factor influencing susceptibility to stress. It is a genetically based, inborn aspect of personality. Temperament attributes are generally associated with affect intensity, occurrence of social activity, and control of stressful life events. Innate temperament affects both psychological and emotional reactions in stressful situations. According to Arnold Buss's EAS theory from 1991, temperament may be defined as a subclass of personality traits that have four components: emotionality — impassiveness, sociability — detachment, activity — lethargy, and impulsivity — deliberateness.

There were only 15 patients included in the study because the disease is rare and it was difficult to find more patients fulfilling the inclusion criteria within the duration of the study. According to our results, patients with Addison's disease have not only increased levels of anxiety and fear with a tendency to overreact to stimuli, but also decreased mobile activity and need for social contact. They have moderate to severe depression and moderate to low levels of emotional intelligence. Such personality traits are not very useful in dealing with the disease. Patients are susceptible to stress and show a tendency to avoid stressors rather than manage them. Problems with the social competence necessary to solve stressful situations can also be observed. Their cognitive processes can be less effective because of worsened mood and increased anxiety. Introvertive traits and low social competence may result in disturbed doctor-patient communication. The results of this study suggest the probable difficulties in doctor-patient communication and the effectiveness of therapy. The psychological characteristics of our patients can limit their involvement in therapy and aggravate their symptoms, which may further result in over-treatment and the induction of iatrogenic Cushing's syndrome.

It seems that psychological support in the proper management of patients with Addison's disease should be indicated, especially in patients with more complicated personality traits and different features of temperament. Our data on the psychological aspects of patients with Addison disease are unique. Only limited data are obtainable in literature [6, 7]; hence, we cannot compare our results with any others.

The increasing emphasis in medicine on treating the whole patient has focused attention on associations between emotions and the disease. The secret to illness management is also to understand what causes feelings of anger, worry, and fear.

At present, cognitive behavioural therapy can teach patients to change their reactions to stressful events. Knowing more about emotions makes medical therapy more effective and improves doctor-patient communication, which is why psychologists should be involved in the diagnostic and therapeutic process.

Conclusions

1. The temperamental characteristics and personality traits of patients with Addison's disease seem useless in stressful events.
2. Psychological care can be helpful in the effective therapy of patient with Addison's disease.

References

1. Burke CW. Adrenocortical insufficiency. Clin Endocrinol Metab 1985; 14: 947.
2. Aron DC, Findling JW, Tyrrell JB. Glucocorticoids and adrenal androgens. In: Greenspan
3. Leigh H, Kraimer SI. The psychiatric manifestations of endocrine disease. Adv Intern Med 1984; 29: 413–445.
4. Oniszczenko W. Kwestionariusz Temperamentu EAS Arnolda H. Bussa i Roberta Plomina. Wersje dla dorosłych i dla dzieci. Adaptacja polska. Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego. Warszawa, 1997.
5. Wrześniowski K, Sosnowski T. Inwentarz Stanu i Cechy Lęku /ISCL/. Polska adaptacja STAI. Polskie Towarzystwo Psychologiczne Wydział Psychologii Uniwersytetu Warszawskiego Laboratorium Technik Diagnostycznych im. Bogdana Zawadzkiego. Warszawa, 1987.
6. Gardner DG, Shoback D. Greenspan's Basic and Clinical Endocrinology. Lange Medical Books/McGraw Hill. Ed. 8. Medical Publishing Division 2007: 367–378.
7. Heijmans M. The role of patients' illness representations in coping and functioning with Addison's disease. Br. J. Health Psychol 1999; 4: 137–149.