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*Characteristics of depressive changes and anxiety in patients
with essential hypertension*

Despite remarkable progress in diagnostics and treatment, hypertension is still a very serious medical and social problem. Results of epidemiological studies in Poland point out that more than 8 million Polish people suffer from this disease (12). The etiology of primary hypertension is still insufficiently explained. Experimental and clinical observations point to the importance of psychic factors (2, 7, 8, 11).

In the 1930's and 1940's precursors of psychosomatic viewing of certain diseases emphasized that patients with primary hypertension are characterized by long-term and mostly unconscious conflicts associated with expressing aggression, protest, resentment, fury and too high ambitions and dependencies (1, 8, 15).

Numerous research works of recent years attribute an increasingly greater role to stress, personality structure, lifestyle, professional work, social support and environmental factors. The authors believe that the enumerated psychic factors have an unquestioned influence in etiopathogenesis, the course of hypertension and therapy of patients suffering from essential hypertension (2, 5, 6, 9).

The purpose of the present paper was to characterize the depressive symptoms and to analyze the anxiety level in patients with essential hypertension.

MATERIAL AND METHODS

The studies were conducted in a group of 38 patients treated for essential hypertension in two internal diseases outpatients' clinics and in two cardiologic outpatients' clinics in the area of Lublin. If other diseases or addiction to alcohol were found out in some patients, the latter were excluded from the studies. All patients gave their consent to participate in the studies.

The studied group comprised 17 women at the age of 20 to 77 (mean age 49.9) years and 21 men at the age of 31 to 76 (mean age 47.7) recognized on the basis of the generally accepted clinical criteria according to WHO. Nine patients had university education (23.7%), sixteen secondary (42.1%), nine had vocational education (23.7%) and four primary education (10.5%).

Before each test, a detailed psychological interview was carried out with the patients, where a special attention was paid to somatic complaints, neurotic symptoms, mood, family situation, material and professional situation as well as the possibilities of further treatment and rehabilitation.

An inventory prepared by the authors of the present paper was used to evaluate the psychological condition of the patients: *Inventory for Patients with Essential Hypertension* by A. Nasiłowska-Barud and M. Kowalik; *State-Trait Anxiety Inventory (STAI)* by C.D. Spielberger in an authorized translation by J. Strelau, M. Tyskarczyk and K. Wrześniewski (14); *Hospital Anxiety and Depression Scale (HADS)* by A. S. Zigmond, R. P. Snaith (4, 13).

Application of these methods made it possible to evaluate and characterize depressive changes and to determine the structure and level of anxiety as state and anxiety as trait.

RESULTS

Results of psychological studies obtained on the basis of State-Trait Anxiety Inventory (STAI) by C.D. Spielberger (Fig. 1) make it possible to state that patients with essential hypertension are characterized by a high level of anxiety-state and a similarly high level of anxiety-trait. Anxiety as a trait is significantly higher as compared to anxiety-state $t=1.685$ $p < 0.1$. Results of studies obtained on the basis of Hospital Anxiety and Depression Scale (HADS) by A. S. Zigmond and R. P. Snaith show that the examined group of patients with essential hypertension is characterized by moderate symptoms of lowered mood-depression.

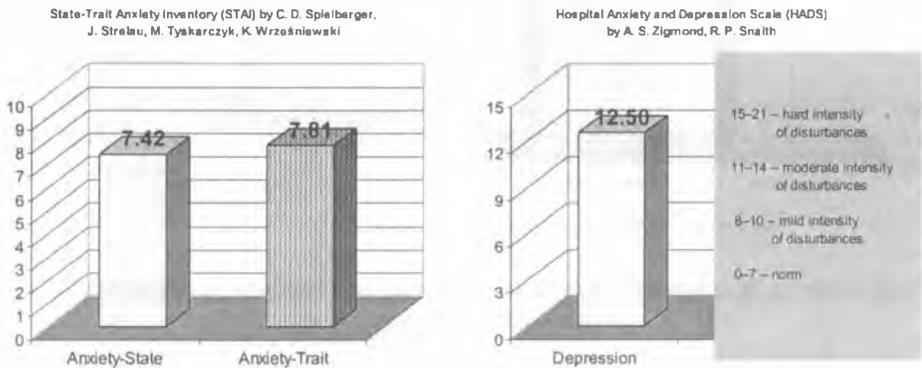


Fig. 1. Mean results of examinations of anxiety and depression in patients with essential hypertension (N = 38)

Further analyses of the achieved results of studies on anxiety-state and anxiety-trait as well as the depressive changes among the patients with essential hypertension were carried out considering some risk factors of cardiovascular diseases such as age, gender and obesity.

Among the examined patients, there was distinguished a group of people who started to suffer from essential hypertension after the age of fifty and those who became ill after that age. In the two compared groups anxiety as state and trait remained on a high level. Depressive symptoms occurred in a moderate degree. A comparative analysis of both groups did not show any significant differences in the intensity of the studied traits depending on the age when essential hypertension appeared (Fig. 2).

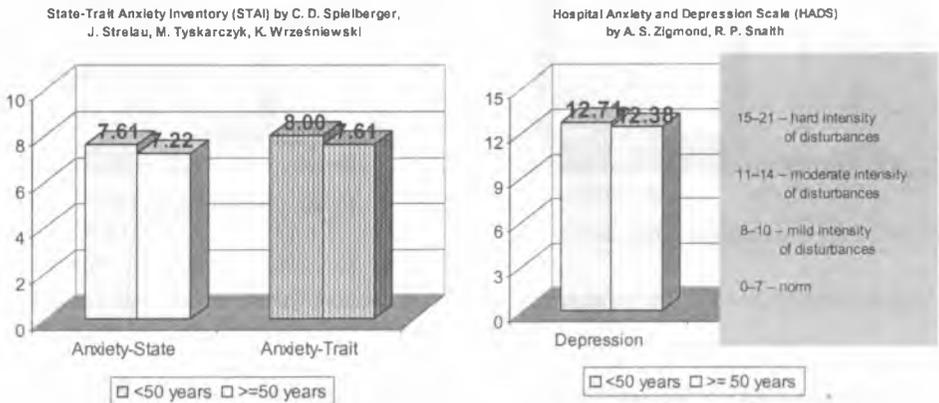


Fig. 2. Mean results of examinations of anxiety and depression in hypertension patients under and over 50 years of age

Figure 3 presents results of the analysis of anxiety-state and anxiety-trait as well as the level of depressive changes in the group of female patients (N = 17) and male patients (N = 21).

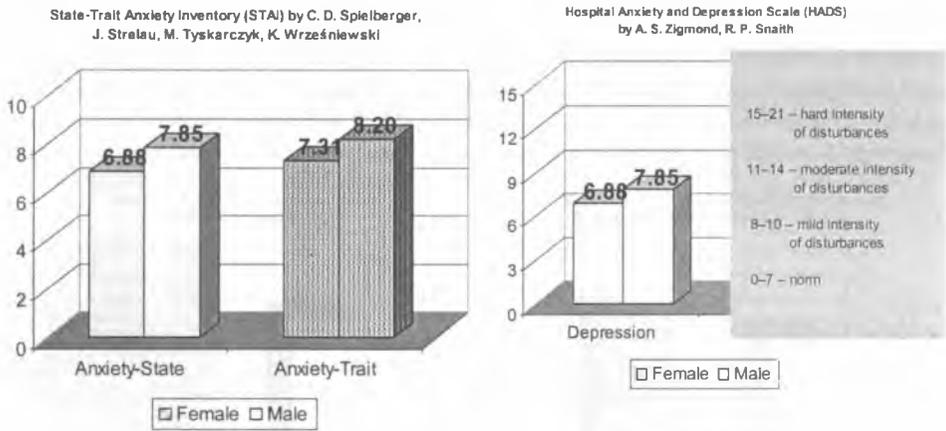


Fig. 3. Mean results of examinations anxiety and depression of female (N = 17) and male (N = 21) patients with essential hypertension

As compared to the female group, the male group was characterized by a significantly higher anxiety-state level $t = 2.816$ $p < 0.01$ and also a higher anxiety-trait level $t = 2.187$ $p < 0.05$. A likewise significantly higher intensity $t = 3.189$ $p < 0.01$ of depressive symptoms (but in a moderate degree) was found out in the male group.

Among the examined patients with essential hypertension, a group of patients N = 7 (which constitutes 18.5% of all the examined patients) with obesity was distinguished (Fig. 4).

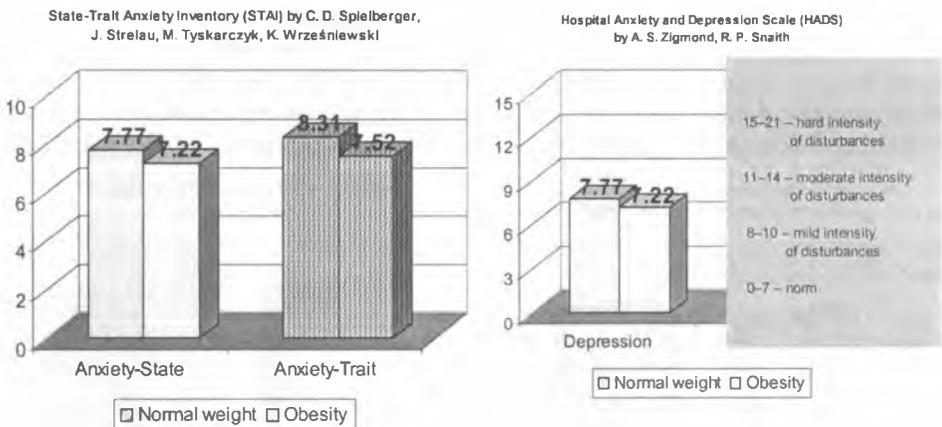


Fig. 4. Mean results of examinations of anxiety and depression in obese patients with essential hypertension

In the group of patients with essential hypertension and obesity the levels of anxiety-state and anxiety-trait were similar and they remained on a high level. The symptoms of lowered mood occurred to a moderate degree. A comparative analysis of the group of patients without obesity did not show any significant relations.

DISCUSSION

Many authors emphasize the importance of psychic factors in essential hypertension (2, 3, 5, 7, 8, 9,10). Analyzing a broadly understood notion of stress, they draw special attention to such factors as the feeling of threat, loss of control over one's own life, anxiety, tension and stress in professional work, making too high demands towards oneself and lack of social support (1, 5, 6, 7, 8, 10).

The results that we achieved on the levels of anxiety and depression are consistent with those obtained by the formerly quoted authors. Negative emotions such as unrest, anxiety, hostility and anger are described in literature as factors connected not only with essential hypertension but also with other cardiovascular diseases (2, 5, 7, 8, 10). Depression, on the other hand, seems to be another major risk factor of essential hypertension. Its prognostic significance can prove to be important and independent of other factors than the feelings of hostility or anger (3, 6, 7, 10, 11).

The present studies are a contribution to explaining the role of anxiety and depression in patients with essential hypertension. However, since they clarify this problem only to a small extent, they require continuation.

CONCLUSIONS

1. Results of studies make it possible to state that depressive symptoms occur in patients with essential hypertension in a moderate degree.

2. Patients with essential hypertension are characterized by increased levels of anxiety-state and anxiety-trait.

3. Patients with hypertension: react with anxiety-state to different kinds of direct threat; react with a high level of anxiety-trait, which is an acquired behavioral disposition; react with anxiety that is disproportionately severe to the real threat.

4. Results of examinations among the patients with essential hypertension point to: a need to diagnose the emotional disturbances; a necessity to apply psychotherapeutic treatment; a necessity to use adequate forms of pharmacotherapy in order to decrease the level of anxiety and depression.

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SUMMARY

Hypertension is among the world's most widespread diseases and one of the most frequent causes of mortality in the adult population. Clinical and experimental observations indicate the importance of psychic factors in the pathogenesis of hypertension. The aim of this study was to characterize depressive symptoms as well as to analyze anxiety level in patients with essential hypertension. A group of 38 patients, 17 females and 21 males, aged 20–77, the average age being 53, treated for essential hypertension diagnosed on the basis of the generally established clinical criteria were examined with the use of A.S. Zigmond's and R.P. Snaith's Hospital Anxiety and Depression Scale (HADS) and C.D. Spielberger's, R.L. Gorsuch's and R.E. Lushene's State-Trait Anxiety Inventory (STAI) in an authorized translation by J. Strelau, M. Tyskarczyk and K. Wrześniewski. Examination results received with the use of HADS reveal a moderate occurrence of depressive symptoms in patients with essential hypertension. The application of STAI enabled state and trait anxiety analysis. The examined patients are characterized by an increased level of A-State as well as an increased level of A-Trait. Patients with hypertension exhibit state anxiety in reaction to all kinds of direct threat factors. They also react with an increased level of trait anxiety as an acquired behavioral disposition. This leads to a conclusion that the examined patients' reaction is marked by the anxiety disproportionate in strength to the actual danger.

Charakterystyka zmian depresyjnych i lęku u chorych z pierwotnym nadciśnieniem tętniczym

Nadciśnienie tętnicze należy do najbardziej rozpowszechnionych chorób na świecie i jest jedną z najczęstszych przyczyn umieralności wśród dorosłej populacji. Obserwacje kliniczne i doświadczalne wskazują na znaczenie czynników psychicznych w patogenezie nadciśnienia tętniczego. Celem niniejszej pracy była charakterystyka objawów depresyjnych oraz analiza poziomu lęku u chorych leczonych z powodu pierwotnego nadciśnienia tętniczego. Grupę 38 chorych, w tym 17 kobiet i 21 mężczyzn, w wieku od 20 do 77 lat, średnia 53 lata, leczonych z powodu pierwotnego nadciśnienia tętniczego, rozpoznanego na podstawie ogólnie przyjętych kryteriów klinicznych, zbadano Skalą HADS – *Hospital Anxiety and Depression Scale* A.S. Zigmond, R.P. Snaith i Inwentarzem Stanu i Cechy Lęku – *State-Trait Anxiety Inventory* (STAI) C.D. Spielberga, R.L. Gorsucha i R.E. Lushene'a w autoryzowanym przekładzie J. Strelau, M. Tyskarczyk i K. Wrześniewskiego. Wyniki otrzymane przy pomocy HADS wskazują, że u chorych z pierwotnym nadciśnieniem tętniczym objawy depresyjne

występują w stopniu umiarkowanym. Zastosowanie STAI pozwoliło na dokonanie analizy lęku stanu oraz lęku cechy. Badanych charakteryzuje podwyższony poziom lęku–stanu (*A-State*) i podwyższony poziom lęku–cechy (*A-Trait*). Pacjenci z nadciśnieniem tętniczym reagują lękiem–stanem na różnego rodzaju czynniki bezpośrednio im zagrażające. Reagują również wysokim poziomem lęku–cechy jako nabytą dyspozycją behawioralną. Pozwala to wnioskować, że badani reagują lękiem nieproporcjonalnie silnym w stosunku do obiektywnego niebezpieczeństwa.