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Self-evaluation scales and Hamilton Depression Rating Scale and CGI compared in female depressive patients

Numerous studies carried out in large representative groups of patients have revealed that depressive conditions are one of most commonly observed health problems. Taking into account the consequences of depression (chronic recurrent course of the disease, premature mortality, negative influence on professional life, the high risk of persistent inability to work, and the risk of alcohol and other substances dependence), its significance is comparable to that of such diseases as the circulatory system diseases, inflammatory and degenerative locomotor diseases, and neoplasms (13, 15).

Last years showed the increase in the number of diagnosed depression. The actual elevation of the number of incidences, connected mainly with the prolongation of population life (depression is the most frequent mental disorder after the 50th year of age), the influence of environmental pathogenic factors (such as people migrations, isolation, loneliness, lack of feeling of safety in large social groups), widespread distribution of chemical substances (including medications) inducing depression can be the causes of the increase. Moreover, more frequent diagnosis of this disorder can be a result of changes of diagnostic criteria (mainly their widening). Its detection is also higher due to better health care system and easier access to psychiatric treatment as well as higher attendance rate of depressive patients, which is the result of informative and educational action concerning depression problem (13, 14).

Epidemiological data have shown that depression occurs more frequently in women than in men (1.5 to 3 times more frequently in women). The risk of depression occurrence is also higher in women. The symptoms and features of the depression syndrome can be detected in approximately 20–25% of women and 12–15% of men (14). Epidemiological studies referring to sex differences were performer by Kessler et al. and Weissman et al. They showed the increase in depression incidence progressing with age and occurring more often in women than in men (approximately from 2:1 to 3–4:1) (9, 22). The literature concerning the subject points to more frequent occurrence of depressive disorders in perimenopausal period as compared to other periods of woman's life (20, 21). Changes of mood were observed in 30% of patients in perimenopausal period who underwent long-term population studies (8, 12).

Sherwin and Hay presented the evaluation of psychic condition of patients in perimenopausal period based on the psychiatric examination with the use of psychometric tools (7, 17). Sherwin's studies revealed major depression in 13% of the examined women in climacteric period and masked depression (mainly with somatic ailments and, to a smaller extent, the decrease in mood and psychomotor driver) was recognized in 21% of patients (17). Hay et al. showed more than 45% of women in perimenopausal period, which was confirmed by endocrine examinations, to obtain high

scores on the Montgomery-Asberg scale and fulfilled the criteria of major and minor depression diagnosis (7).

Krogulski diagnosed patients in the Menopausal Outpatients' Department in Lódź and revealed depressive disorders in 67.2% of the examined women, anxiety disorders – in 30.4%, and other psychic disorders (schizophrenia or schizotypal disorders, organic disorders due to central nervous system damage) in 2.4% of patients (10).

The increase in depression incidence was the cause of self-evaluation scales use that serve for the description of the symptoms intensity.

The aim of the study was the comparison of the results obtained with the use of self--evaluation scales: Beck Depression Inventory and Patient Global Impressions and the results of scales used by a clinician: 24-items Hamilton Depression Rating Scale and Clinical Global Impressions.

MATERIAL AND METHODS

The study was performed in the group of 151 women in perimenopausal period, inhabitants of the Podlasie Region, aged 41–59 (mean 49.4 years) who gave their written consent for the participation in the study. Literature data, which point to progressive, together with age, depressive disorder incidence more often in women than in men, helped to choose the examined group (9, 22). The diagnosis was made on the basis of the psychiatric examination and case history with the help of the Tenth Revision of the International Statistical Classification of Diseases and Health Related Problems – ICD-10.

Patients were supposed to fill the following scales by themselves: • Beck Depression Inventory (BDI) (3, 4) • Patient Global Impressions (PGI) (5, 6, 11). The mental condition was assessed using: • 24-items Hamilton Depression Rating Scale (HDRS) (2, 3) • Clinical Global Impressions (CGI) (5, 6, 11). Interdependence between the features was examined using the exact Fisher test (for the tables of correlation 2x2) or chi^2 independence test (for larger tables of correlation).

The statistical description of quantitative features was performed using arithmetic means, standard deviation, and minimum and maximum values. The groups were compared by pairs with the use of multiple comparison test NIR. In case of the comparison of the level of features in two groups, t-Student test for two means was used. The Pearson linear correlation coefficient/index was used to assess the interdependence between measurable features. Its significance was evaluated with t-Student test for correlation coefficient. The differences of means or feature interdependence were considered significant at $p<0.05$ and the values at $0.05<p<0.1$ – were "on the border of significance". The calculation was performed using statistical program STATISTICA 6.0 PL (1, 18, 19).

RESULTS

The examined group was divided into: group Ch – 66 patients (43.7%) with psychic disturbances and group Z – 85 women considered healthy (56.3%). The group was divided with regard to the presence or absence of psychic disturbances (regardless of the intensity and type of diagnosed disturbances).

The presence of psychic disturbances was stated in 43.7% of women (N=66), including depressive disorders in 34.4% of patients (N=52), and generalized anxiety disorders (GAD) in 33.8% (N=51). The coexistence of depression and generalized anxiety disorders was observed in 24.5% of women (N=37). All symptoms mentioned both on BDI and HDRS scales were more frequently reported by patients from Ch group ($p<0.001$).

The next stage of the study included the comparison of the chosen items of both scales. In the analyses, we did not take into account the intensity of disorders as the groups were not numerous enough for reliable conclusions. Items, referring to complaints that were reported by less than 30% of women of a given population (N=151), were excluded from the analyses.

"Mood decrease" – point 1 on BDI scale was reported by 50.0% of patients from Ch group and 4.7% from Z group; "Pessimism" – point 2 on BDI scale was declared by 65.2% of Ch group and 16.5% of Z group; "Depressed mood" – point 1 on HDRS scale was confirmed by 72.7% of Ch group and 16.5% of Z group; "Feeling of guilt" – point 5 on BDI scale – 51.5% of Ch group and 12.9% of Z group. "Feeling of guilt" – point 2 on HDRS scale, 63.6% in Ch group and 22.4% in Z group; "Incapacity to work" – point 15 on BDI scale were confirmed by 34.8% of Ch group and 2.4% of Z group; Worsening as far as "work and activity" are concerned – point 6 on HDRS scale, reported by 60.6% of Ch group and 5.9% of Z group.

Insomnia – point 16 on BDI scale was stated by 75.8% of Ch group and 31.8% of Z group. HDRS scale contains three points concerning sleep disturbances: disturbances of falling asleep – "insomnia early" – point 4 on HDRS scale was reported by 39.4% of Ch group and 9.4% of Z group; shallow interrupted sleep – "insomnia middle" – point 5 was confirmed by 65.2% of Ch group and 18.8% of Z group; early waking up – "insomnia late" – point 6 was admitted by 47.0% of Ch group and 18.8% of Z group.

"Hypochondriasis" – point 20 on BDI scale was stated by 50.0% of Ch group and 8.2% of Z group. "Hypochondriasis" – point 15 on HDRS scale was confirmed by 56.1% of women from Ch group and 15.3% from Z group. "Loss of libido" – point 21 on BDI scale – in 71.2% of Ch group and 40.0% of Z group. "Genital symptoms" – loss of libido and menstrual disturbances – point 14 on HDRS scale was confirmed by 74.2% of women from Ch group and 45.9% from Z group.

It can be seen that despite the points concerning sleep disturbances, hypochondria and loss of libido, the results obtained on BDI scale are significantly lower than those obtained on HDRS scale. It is reflected by the summary results of both scales. Although arithmetic means of BDI results were significantly higher in Ch group than in Z group ($p<0.001$), only 7.6% of Ch patients obtained 19 points, which could point to mild depression. The arithmetic mean in Ch group was 10.70, while in Z group it was 2.47 (Table 1). On the other hand, the use of HDRS scale showed that 93.9% of the patients from Ch group obtained in total more than 7 points (diagnosed mild depression), in Z group – 12.9% ($p<0.001$). Women from Z group, who obtained more than 7 points on HDRS scale were qualified to "healthy" group as they did not fulfil depression diagnosis criteria according to ICD-10 (Table 4).

Table 1. Analysis of mean results of BDI scale

	Healthy – Group Z N=85 100%	Ill – Group Ch N=66 100%
Arithmetic mean $\bar{x}$	2.47	10.70
Standard variation SD	2.34	6.50
Minimum value	0	1
Maximum value	10	33
Evaluation of significance of mean differences p <	p<0.001	

Table 2. Comparison of mean results in the examined group obtained on CGI and PGI scales

	PGI 1+2	PGI 3	PGI 4+5+6+7
CGI 1+2	**68**	~~8~~	~~8~~
CGI 3	21	**9**	~~11~~
CGI 4+5+6+7	3	9	**14**

In 91 cases, the determination of disease intensification was identical in the opinion of the doctor and the patient (grey fields). Crossed out fields show cases in which patient's evaluation was higher than that of the doctor's (27 cases). White fields – when the doctor's opinion was higher than that of the patient (33 cases)

Table 3. Analysis of depression occurrence rate based on results obtained on HDRS scale

		Healthy – Group Z N=85 100%	Ill – Group Ch N=66 100%
No depression <=7	N %	74 87.1	4 6.1
Depression >7	N %	11 12.9	62 93.9
Evaluation of significance of mean differences p <		p<0.001	

Table 4. Interpretation of results used in scale examination

BDI	HDRS	CGI/PGI
0–18 points – no depression 19–25 points – mild depression 26–30 points – moderate depression > 30 points – severe depression	0–7 points – no/borderline depression 8–17 points – mild depression 18–25 points – moderate depression > 25 points – severe depression	1 – normal, not ill 2 – minimally ill 3 – mildly ill 4 – moderately ill 5 – markedly ill 6 – severely ill 7 – very severely ill

The comparison of CGI and PGI scales results was the next step of the study. The evaluation of health condition given by the physician varied from 1 (normal, not ill) to 7 points (very severely ill). The rate of occurrence of higher scores (more than 2), which pointed to worse health condition (minimally ill), was observed more often in Ch group ($p<0.001$). The score 3 (mildly ill) was obtained by 60.6% of patients from Ch group and only 1.2% from Z group. The score 4 and 5 (moderately and markedly ill) – 39.4% from Ch group. As far as Z group is concerned, the score 4 or higher was not obtained by any of the subjects. The possibility to assess own health condition (similarly to the evaluation by the doctor) varied from 1 (normal, not ill) to 7 points (very severely ill). The rate of higher than 2 score occurrence, which indicates worse assessment of own health state (minimally ill), was observed more frequently in Ch group ($p<0.001$). During self-evaluation, 27.3% of patients from Ch group obtained 3 (mildly ill) and 9.4% from Z group. The score 4 and 5 (moderately and markedly ill) were given to 36.4% of Ch group and 10.6% of Z group. The statistically significant accordance was found between the assessment on CGI and PGI scales ($p<0.001$) (Table 3).

DISCUSSION

There is still strong cultural and traditional prejudice against psychic disturbances in Poland. As a consequence, patients in perimenopausal period are reluctant to talk about their psychic symptoms. Their complaints usually concern somatic problems, characteristic of the age.

In the group of patients addmitted to the Menopausal Outpatients' Department in Łódź, whose depressive symptoms had clinical significance, 31.58% of respondents complained of joint and bone pain and it was the basic cause of their visit. Persistent fear, anxiety, and irritation (16.84%), problems with menstruation (14.21%), and depression (11.05%) were rarely complained of (10).

In the American society, considered an open one, only 1 per 20 persons with depressive symptoms reports depression as the main cause of the visit (10). For a part of women, feeling bad in the perimenopausal period is regarded as an element inseparably connected with this particular phase of life and therefore, they do not go to a doctor or delay their visit (16). The factors mentioned above can explain the lowered scores of self-evaluation on BDI.

CONCLUSIONS

1. The total number of mental disorders was stated in 43.7% of patients of the examined group. Depressive disturbances were diagnosed in 34.4% of women and generalized anxiety – in 33.8%. The coexistence of depression and generalized anxiety was observed in 24.5% of women.

2. Sumary results of self-evaluation BDI scale were significantly lower than those obtained by the patients on HDRS scale.

3. The statistically significant accordance between the evaluation on CGI and PGI scales were observed.

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SUMMARY

The aim of the study was the comparison of the results obtained on self-evaluation scales: Beck Depression Inventory (BDI) and Patient Global Impressions (PGI) and the results of scales used by the clinician: 24-items Hamilton Depression Rating Scale (HDRS) and Clinical Global Impressions (CGI). The study concerned 151 women in perimenopausal period. Summary results of BDI self--evaluation scale were significantly lower than those on HDRS scale. The statistically significant accordance between the results of CGI and PGI scales was observed.

Porównanie wyników uzyskanych przy zastosowaniu skal samooceny z wynikami uzyskanymi przy zastosowaniu 24-stopniowej skali depresji według Hamiltona oraz skali CGI u kobiet z depresją

Celem pracy było porównanie wyników uzyskanych przy zastosowaniu skal samooceny: Inwentarza Objawów Depresyjnych wg Becka (BDI) i Skali Nasilenia Choroby w ocenie pacjenta (PGI) z wynikami uzyskanymi przy zastosowaniu skal używanych przez klinicystę: 24-stopniowej Skali Depresji wg Hamiltona (HDRS) oraz Skali Nasilenia Choroby w ocenie lekarza (CGI).

Badaniem objęto 151 kobiet w okresie okołomenopauzalnym. Sumaryczne wyniki skali samooceny BDI okazały się istotnie niższe w porównaniu z wynikami uzyskanymi przez badane w skali HDRS. Stwierdzono istotną statystycznie zgodność między ocenami w skali CGI i PGI.