Comparative analysis of quality of life women in menopause period in Poland, Greece and Belorussia using MRS scale. Preliminary report

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Abstract

Purpose: The aim of this study was the assessment of climacteric symptoms, the activity and quality of life of women in menopausal period from Poland, Greece and Belorussia using a Menopause Rating Scale (MRS).

Material and methods: The study was conducted among women in age after 45 years, from Poland (55), Belorussia (50) and Greece (85). MRS was obtained from the Professor Heinemann from Center of Epidemiology and Health Studies in Berlin. The scoring scheme is simple, i.e. the score increases point by point with increasing severity of subjectively perceived symptoms in each of the 11 items (severity 0 – no complaints, 4 scoring points – severe). The respondent provides her personal perception by checking one of 5 possible boxes of "severity" for each of the items.

Results: Mild and no complaints in similar degree were reported by all women from these three countries. We found significant ($p<0.001$) differences between severe complaints reported by Greek women compared with complaints respondents from Belorussia and Poland. Moderate complaints were reported more frequently by women from Poland (32.56%) and Belorussia (34%) compared with women from Greece (28.55%).

Severe complaints were noted more rarely in 1.6% Greek women compared with 2.6% Belorussian and 3% Polish respondents. No significant differences between no complainants, mild, moderate, marked and severe between women from Belorussia, Poland and Greece.

Conclusions: Generally we did not observe significant differences between reported complaints by women from Belorussia, Poland and Greece.

Key words: menopause, scale MRS, Poland, Greece, Belorussia.

Introduction

Menopause is the time in woman's life when her period stops. It usually occurs naturally, bridge often after age 45 years. Menopause happens because the woman's ovary stops producing the hormones the estrogen and progesterone. Changes and symptoms can the start several years earlier. They include: change in periods – shorter or longer, lighter or heavier, with more or less time in between; hot flashes and/or night sweats; trouble sleeping; vaginal dryness, mood swings, trouble focusing and less hair on head, more on face [1,2]. Women, as to men, experience an age-related decline of physical and mental capacity. They observe symptoms such as periodic sweating or hot flushes, depression, insomnia, impaired memory, lack of concentration, nervousness, and bone, and joint complaints. Menopause has an impact on women quality of life. The Menopause Rating Scale (MRS) is the lack of standardized scales you developed in response this measure the severity of aging-symptoms and their impact on the health-related Quality of Life (HRQoL) in the 1990. Scale can easily be completed by women, notes their physician [2,3]. The original MRS is used since 1992. It documents climacteric symptoms and their changes during the treatment [2,4]. Based on this investigation, the revised and final version of the MRS we used. The aim of this study was the assessment of climacteric symptoms and quality of life of women in menopausal period from Poland, Greece and Belorussia using the MRS scale.

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N=50	No		Mild		Moderate		Marked		Severe	
	N/%		N/%		N/%		N/%		N/%	
Hot flushes	2	4%	15	30%	30	60%	3	6%	0	
Hart discomfort	13	26%	25	50%	7	14%	4	8%	1	2%
Insomnia	7	14%	20	40%	18	36%	5	10%	0	
Depression	20	40%	22	44%	8	16%	0		0	
Irritability	2	4%	10	20%	25	50%	13	26%	0	
Anxiety	5	10%	20	40%	21	42%	4	8%	0	
Fatigue	10	20%	20	40%	13	26%	6	12%	1	2%
Sexual problems	11	22%	21	42%	18	36%	0		0	
Urogenital problems	5	10%	18	36%	21	42%	4	8%	2	4%
Vaginal dryness	5	10%	22	44%	20	40%	3	6%	0	
Muscles and joints problems	32	64%	10	20%	8	16%	0		0	
Mean percentage	20%		37%		34%		9%		2.6%	

Material and methods

The study was conducted among women in age after 45 years, from Poland (55), Bialarussia (50) and Greece (85). The Menopause Rating Scale (MRS) scale was obtained from the Professor Heinemann from Center of Epidemiology and Health Studies in Berlin. The MRS is psychometric rules formally standardized according. It consists of and letter of 11 symptoms which have been answered. The respondent have and choice among 5 categories: no symptom, mild, moderate, marked, and severe. During the standardization of this instrument, three independent dimensions were identified explaining 58.8% of the total variance (factor analysis): psychological, somato-vegetative, and urogenital subscale. The means (SD) of the scoring points of the total scale (and the three subscales), Wilcoxon signed rank test was used. The statistical analyses were performed with the commercial statistical package Statistica 6.0.

Results

Mild and no complaints in similar degree were reported by all women from these three countries. We also found that almost 14.4% of women from Greece had marked complaints in MRS scale compared to complaints of 9% respondents from Belorussia and Poland 9.5%. These differences were significant (p<0.001). Moderate complaints were reported more frequently by women from Poland (32.56%) and Belorussia (34%) compared with women from Greece (28.55%). Severe complaints were noted more rarely in 1.6% Greek women compared with 2.6% Belorussian and 3% Polish respondents. These findings were not significant. Furthermore, a half of respondents from Poland, Belorussia and Greece reported hot flushes (in moderate degree). In contrast 70% of Greek women declared hot flushes, from Poland 54.4% and 60% from Belorussia. Insomnia was reported more frequently by women from Poland (34.6%) and Belorussia (36%) than by respondents from Greece (17.6%). No significant differences between no complainants, mild, moderate, marked and severe between women from Belorussia, Poland and Greece. Generally we did not observe significant differences in reported complaints between women from these countries.

Discussion

In the present study, generally we did not significant differences in reported complaints in MRS scale. We noted also that more Greek women reported marked complaints in MRS scale compared with complaints of respondents from Belorussia and Poland. To our knowledge it is the first study comparing MRS complaints among women from different countries.

The validation of the MRS began some years ago [3-7] with the objectives (1) to enable comparisons of the symptoms of aging between groups of women under different conditions, (2) to compare severity of symptoms over time, and (3) to measure changes pre- and post-treatment.

Schneider et al. [6] evaluated the Menopause Rating Scale (MRS) for scoring menopausal symptoms by comparison with other instruments relevant for women in their menopausal transition: the Kupperman index and the quality-of-life scale SF-36. In population sample of 306 of German women (aged 40-60) they conducted the study. A comparison of the MRS with the Kupperman index produced a high correlation of raw scores (r=0.91). The authors found a strikingly good association between the subscales of the SF-36 and the MRS. The Menopause Rating Scale is a valuable modern tool for the assessment of menopausal complaints. It combines in practice excellent applicability and good reliability, and there are normal values for the population available. The MRS could serve as an adequate diagnostic instrument for menopausal quality of life.

Although the Kupperman index is the monitor menopausal symptoms is validated according this psychometric standards it is still in use in the medical practice. Generic Quality of Life scale SF 36, two subscales of the multidomain Quality of Life scale SF36 was compared with the MRS: the somatic sum score (with somatic domain of MRS) and the psychologic subscales

Table 2. **Menopause symptoms in MRS scale in women from Poland**

N=55	No		Mild		Moderate		Marked		Severe	
	N/%		N/%		N/%		N/%		N/%	
Hot flushes	2	3.6%	20	36.4%	30	54.4%	3	5.5%	0	
Hart discomfort	13	23.6%	27	49.1%	9	16.4%	4	7.3%	2	3.6%
Insomnia	8	14.5%	21	38.2%	19	34.6%	6	10.9%	1	1.8%
Depression	22	40%	23	41.8%	9	16.4%	1	1.8%	0	
Irritability	2	3.6%	13	12.7%	26	47.3%	13	23.6%	1	1.8%
Anxiety	7	12.7%	22	40%	21	38.2%	5	9.1%	0	
Fatigue	10	18.2%	22	40%	14	25.5%	8	14.5%	1	1.8%
Sexual problems	14	25.5%	23	41.8%	18	32.7%	0		0	
Urogenital problems	5	9.1%	20	36.4%	22	40%	4	7.3%	4	7.2%
Vaginal dryness	5	9.1%	26	47.3%	20	36.3%	3	5.5%	1	1.8%
Muscles and joints problems	35	63.6%	11	20%	9	16.4%	0		0	
Mean percentage	20.32%		36.7%		32.56%		9.5%		3.01%	

Table 3. **Menopause symptoms in MRS scale in women from Greece**

N=85	No		Mild		Moderate		Marked		Severe	
	N/%		N/%		N/%		N/%		N/%	
Hot flushes	8	9.4%	3	3.5%	60	70.6%	12	14.1%	2	2.4%
Hart discomfort	17	20.1%	35	41.2%	20	23.6%	12	14.1%	0	
Insomnia	42	49.4%	23	27.1%	15	17.6%	5	5.9%	0	
Depression	22	25.9%	50	58.9%	13	15.2%	0		0	
Irritability	2	2.4%	12	14.1%	43	50.6%	28	32.9%	0	
Anxiety	18	21.2%	33	38.8%	21	24.7%	12	14.1%	1	1.2%
Fatigue	18	21.2%	33	38.8%	21	24.7%	12	14.1%	1	1.2%
Sexual problems	22	25.9%	50	58.9%	13	15.2%	0		0	
Urogenital problems	18	21.1%	35	41.2%	20	23.6%	12	14.1%	0	
Vaginal dryness	15	17.6%	35	41.2%	23	27.1%	12	14.1%	0	
Muscles and joints problems	44	51.8%	23	27.1%	18	21.1%	0		0	
Mean percentage	21.18%		35.53%		28.55%		14.4%		1.6%	

of both instruments. Both somatic domains were sufficiently good and significant associated: Kendall's tau-b=0.43 (95% CI 0.52-0.35). That means, the higher the score in the somatic dimension of the MRS, the lower the quality of life according to the somatic sum-score of the SF36. Similar was the results of the comparison of the psychological scores of both instruments: Kendall's tau-b=0.49 (95% CI 0.56-0.41); Pearson correlation coefficient r=0.73 (95% CI 0.81-0.65) [5,6].

Norm values from different populations were presented showing that a direct comparison between Europe and North America is possible, but caution recommended with comparisons of data from Latin America and Indonesia. But this will not affect intra-individual comparisons within clinical trials [10].

The currently available methodological evidence points towards a high quality of the MRS scale to measure and to compare HRQoL of aging women in different regions and over time, it suggests a high reliability and high validity as far as the process of construct validation could be completed yet [8].

In the previous study [10] it was observed an unexpected good sensitivity/specificity: sensitivity (correct prediction of a positive assessment by the physician) 70.8% and specificity (correct prediction of a negative assessment by the physician)

73.5%. The authors assumed that in many cases the true treatment effect is better reflected by the self-administered MRS then by this form of clinical judgement.

In recent report [11] the MRS scale was applied with additional patient related information (age at menopause, level of education, working/non-working and exercising or not). The results were evaluated for psychological, somatic, and urogenital symptoms. A significantly higher percentage of women (36%) showed a psychological score of >7; while a higher percentage of postmenopausal showed somatic score and urogenital score >7 (>40%). Working women had more psychological symptoms whereas non-working women showed a greater incidence of somatic symptoms. The authors concluded that age, level of education and working/non-working status may also contribute to significant variations in menopausal symptoms.

A critical methodical assessment by one of the participants in the development of this new scale showed methodical deficiencies which theoretically as well as practically limited the use of the scale [3].

Heinemann et al. [4] reviewed the current state of the instrument particularly concerning versions of the scale in different languages. The MRS translations were performed following

international methodological recommendations for the linguistic and cultural adaptation of HRQoL instruments. The first translation was done from the German original scale into English (UK and USA). The English version was used as the source language for the translations into French, Spanish, Swedish, Mexican/Argentine, Brazilian, Turkish, and Indonesian languages. The currently available 9 language versions have been translated following international standards for the linguistic and cultural translation of quality of life scales. Assistance is offered to help interested parties in the translation process.

Conclusions

Concluding, the Menopause Rating Scale is a easy and useful tool to measure the severity of age-/menopause-related complaints by rating a profile of symptoms. Generally we did not find significant differences in reported complaints in MRS scale between women from Belorussia, Poland and Greece.

References

1. Zoler YF, Acquadro C, Schaefer M. Litearture review of instruments to assess health-related quality of life during and after menopause. Qual Life Res, 2005: 14: 309-27.

2. Hauser GA, Huber IC, Keller PJ, Lauritzen C, Schneider HPG. Evaluation der klinischen Beschwerden (Menopause Rating Scale). Zentralbl Gynakol, 1994; 116: 16-23.

3. Potthoff P, Heinemann LAJ, Schneider HPG, Rosemeier HP, Hauser GA. Menopause-Rating Skala (MRS): Methodische Standardisierung in der deutschen Bevölkerung. Zentralbl Gynakol, 2000; 122: 280-6.

4. Heinemann K, Potthoff P, Schneider HP. International versions of the Menopause Rating Scale (MRS). Health Qual Life Outcomes, 2003; 1: 28.

5. Heinemann K, Assmann A, Möhner S, Schneider HPG, Heinemann LAJ. Reliabilität der Menopause-Rating-Skala (MRS). Untersuchung für die Deutsche Bevölkerung. Zentralbl Gynakol, 2002; 124: 161-3.

6. Schneider HPG, Heinemann LAJ, Rosemeier HP, Potthoff P, Behre HM. The Menopause Rating Scale (MRS): Reliability of scores of menopausal complaints. Climacteric, 2000, 3: 59-64.

7. Schneider HPG, Behre HM. Contemporary evaluation of climacteric complaints: Its impact on quality of life. In: Hormone replacement therapy and quality of life. The Parthenon Publishing Group. Schneider HPG, editor. London, New York, Washington: Boca Raton; 2002, p. 45-61.

8. Greene JG. Measuring the symptom dimension of quality of life: General and menopause-specific scales and their subscale structure. In: Hormone replacement therapy and quality of life. The Parthenon Publishing Group. Schneider HPG, editor. London, New York, Washington: Boca Raton; 2002: p. 35-43.

9. Schneider HPG, Heinemann LAJ, Rosemeier HP, Potthoff P, Behre HM. The Menopause Rating Scale (MRS): Comparison with Kupperman Index and Quality of Life Scale SF-36. Climacteric, 2000; 3: 50-8.

10. Heinemann K, Ruebig A, Potthoff P, Schneider HP, Strelow F, Heinemann LA, Do MT. The Menopause Rating Scale (MRS) scale: a methodological review Health Qual Life Outcomes. 2004; 2: 45.

11. Kakkar V, Kaur D, Chopra K, Kaur A, Kaur IP. Assesment of the variation in menopausal symptoms with age, education and working/non-working status in north-Indian sub population using menopause rating scale (MRS). Mauritius, 2007; 4: 34-9.