Menopause Rating Scale (MRS): A Simple Tool for Assessment of Climacteric Symptoms in Pakistani Women

Objective: To determine the value of Menopause Rating Scale (MRS) in assessing Post-menopausal women.

Study Design: Cross sectional study

Place and Duration: The study was undertaken at MCH Centre Unit II, Pakistan Institute of Medical Sciences, Islamabad from 1st to 29th February 2008.

Materials and Methods: The study subjects were women beyond 45 years of age with amenorrhea of more than one year duration. A Menopause Rating Scale (MRS) chart was filled for each woman. The main outcome measures were MRS score and the time taken to administer it. The secondary outcome measures were the mean age at menopause, educational status, HRT use and time elapsed since menopause.

Results: Fifty women fulfilling the study criteria were interviewed. The mean age of these women was 56 years. The mean age at menopause was 48.5 years and all were multiparous. 18% of women were uneducated, 75% had passed intermediate (grade 12) and seven percent had professional degrees. The average duration for disappearance of postmenopausal symptoms was 4.5 years. 70% of women were still symptomatic while the rest were symptom free. Hormone replacement was ever taken by 8%. The Menopause Rating Scale ranged from 9-21 score with a mean of 12. The most commonly reported symptoms were hot flushes (90%) and sleep disturbances (89%) followed by palpitations (42%). Sexual problems (18%) and bladder symptoms (12%) were reported least frequently. The time to administer MRS ranged from 3-7 min with a mean of 4.8min.

Conclusion: Menopause rating scale was easily and rapidly administered comprehensive tool for assessing symptoms of climacteric women.

Key Words: Menopause, Climacteric, Menopause rating scale.

Introduction

The menopause is a physiologic event, a transition in life that occurs in all women who reach midlife. The frequency of ovulation decreases by the age of 40 years and reproductive function ceases within the following 15 years. The menopausal woman has profound reduction in ovarian sex steroid production. Estrogen deficiency is associated with symptoms like hot flushes, night sweats, insomnia and vaginal dryness. Many other symptoms and conditions like restless legs, muscle and joint pains, palpitations, forgetfulness, depressed mood, osteoporosis and dyslipidemia are associated with menopause although these may not all be directly related to estrogen lack.

According to Massachusetts Women’s Health Study, cessation of menses is perceived by most women to have no negative impact on their subsequent physical and mental health. With the exception of women experiencing surgical menopause, majority of these women felt happy and healthy and did not seek contact with health care providers. Among Muslim women in Pakistan the added advantage of uninterrupted prayers and fasting in addition to fertility cessation leads to welcoming of this transition.

Menopause has also been looked on as a signal occurring at the right time of life when preventive health...
care is crucial. The primary aim of health promotion is improvement of quality of life (QOL). Assessment of QOL at menopause has been largely inadequate. Despite evidence of psychosocial distress, the level of development and evaluation of QOL is poor in the gynecology outpatient clinics.

By definition scales are instruments that measure a continuum of phenomena using ordinal scaling. Among the various commonly used scales to assess menopause, the final Menopause Rating Scale (MRS) comprises of 11 symptoms each rated on a five point scale of severity. This scale has been validated in eight languages and the construct validity of this score has been demonstrated in HRT clinical trial as well. A study was therefore undertaken at MCH Centre to determine the value of Menopause Rating Scale in assessing the quality of life in postmenopausal women.

Materials and Methods

A prospective cross sectional study was undertaken at MCH Centre Unit II, Pakistan Institute of Medical Sciences, Islamabad. The duration of study was from 1st to 29th February 2008. The subjects were women beyond 45 years of age with amenorrhea of more than one year duration. A Menopause Rating Scale (MRS) chart comprising of 11 symptoms, each rated on a five point scale of severity was filled for each woman (table I).

### Table I. Validated items of the Menopause Rating Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Hot flushes, sweating (episodes of sweating)</td>
</tr>
<tr>
<td>2</td>
<td>Heart discomfort (unusual awareness of heart beat, heart skipping, heart racing, tightness)</td>
</tr>
<tr>
<td>3</td>
<td>Sleep problems (difficulty falling asleep, difficulty in sleeping through the night, waking up too early)</td>
</tr>
<tr>
<td>4</td>
<td>Depressive mood (feeling ‘down’, sad, on the verge of tears, lack of drive, mood swings)</td>
</tr>
<tr>
<td>5</td>
<td>Irritability (feeling nervous, inner tension, feeling aggressive)</td>
</tr>
<tr>
<td>6</td>
<td>Anxiety (inner restlessness, feeling ‘panicky’)</td>
</tr>
<tr>
<td>7</td>
<td>Physical and mental exhaustion (general decrease in performance, impaired memory, decrease in concentration, forgetfulness)</td>
</tr>
<tr>
<td>8</td>
<td>Sexual problems (change in sexual desire, in sexual activity and satisfaction)</td>
</tr>
<tr>
<td>9</td>
<td>Bladder problems (difficulty in urinating, increased need to urinate, bladder incontinence)</td>
</tr>
<tr>
<td>10</td>
<td>Dryness of vagina (sensation of dryness or burning in the vagina, difficulty with intercourse)</td>
</tr>
<tr>
<td>11</td>
<td>Joint and muscular discomfort (pain in the joints, rheumatoid complaints)</td>
</tr>
</tbody>
</table>

The degrees of severity according to WHO standards range from no problem to mild, moderate, severe and complete problems (table II).

### Table II: WHO Standards of degree of severity of symptoms

<table>
<thead>
<tr>
<th>No problem</th>
<th>Mild problems</th>
<th>Moderate problems</th>
<th>Severe problems</th>
<th>Complete problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>None, absent, negligible</td>
<td>Slight, low</td>
<td>Medium, fair</td>
<td>High, extreme</td>
<td>Total</td>
</tr>
<tr>
<td>0 – 4%</td>
<td>5 – 24%</td>
<td>25 – 49%</td>
<td>50 -95%</td>
<td>95 – 100%</td>
</tr>
</tbody>
</table>

The main outcome measures were the MRS scores and the time taken to administer it. The secondary outcome measures were the mean age at menopause, educational status, HRT use and time elapsed since menopause. The interviews were conducted by a single dedicated Senior Post graduate FCPS resident on a pre-designed study Performa. The data was then analyzed on SPSS 11 and means, frequency and percentages determined.

Results

Fifty women fulfilling the study criteria were interviewed. The mean age of these women was 56 years. They had menopause at the mean age of 48.5 years and all were multiparous. 18% of women were uneducated, 75% had passed intermediate (grade 12) and seven percent had professional degrees. The average duration for disappearance of perimenopausal symptoms was 4.5 years. 70% of women were still symptomatic with a minimum of 11 MRS score while 30% were symptom free. Hormone replacement therapy was ever taken by 8% of these women. The Menopause Rating Scale ranged from 9 to 21 with a mean of 12. The most commonly reported symptoms were hot flushes (90%) and sleep disturbances (89%) followed by palpitations (42%). Sexual problems (18%) and bladder symptoms (12%) were reported least frequently. The time taken to administer MRS questionnaire ranged from 3 to 7 minutes with a mean of 4.8 minutes.

Discussion

The word climacteric is a Greek derivation of “Steps of a ladder”. Over the years middle aged women have been viewed from extremes of either climbing up
Symptoms associated with menopause have been known since a long time but it was only from 1930s that estrogens isolated from urine of pregnant women were found to be an effective symptom of climacteric symptoms. Reliable and valid measures of multi symptom conditions generally come in the form of scales and subscales developed on the basis of principles of test construction and scaling.

Gerald Greene has formulated four criteria that standardized menopause specific scales should satisfy. These include possession of sound psychometric properties and construction on the basis of a factor analysis. Such scales should be standardized using representative populations of climacteric women and consist of several subscales to measure different aspects of climacteric symptoms. There are five scales that fulfill these four criteria, namely Greene Climacteric scale, Menopause Symptom List, Menopause Rating Scale and Utian Quality of Life Score.

The mean age of women was 56 years whereas it was 45.1 +/- 3.1 years (median 45) in a study conducted by Chedraui P et al. Menopause occurred at the mean age of 48.5 years in this study while Kakkar V et al showed that the average age at which menopause set in, in a cohort was 48.7 +/- 2.3 years (46.4-51 years). All were multipara and 18% of women were uneducated, 75% had passed intermediate (grade 12) and seven percent had professional degrees. Del Prado M et al found that the mean number of children was 2.8 +/- 1.5 and 50% of them had less than 12 years of formal education whereas Chedraui P et al showed that 8.3% had less than 12 years of schooling.

In this study, 70% of women were still symptomatic with a minimum of 11 MRS score while 30% were symptom free. Del Prado M et al found that 80% of women had moderate to severe climacteric symptoms while 90% of the sample had one or more menopausal symptoms as assessed by Waidyasekera H et al. Hormone replacement therapy was ever taken by 8% of these women. The Menopause Rating Scale ranged from 9 to 21 with a mean of 12. Del Prado M found that 6% had ever used hormone replacement therapy and the total MRS score was 16.2 +/- 8.5.

The most commonly reported symptoms were hot flushes (90%) and sleep disturbances (89%) followed by palpitations (42%). Sexual problems (18%) and bladder symptoms (12%) were reported least frequently. Monterrosa A et al found that the frequency of somatic symptoms, heart discomfort and muscle and joint problems, was higher among Afro-Colombian women than in non-Afro-Colombian women (38.8% vs. 26.8% and 77.1% vs. 43.5%, respectively, p<0.05) and all items of the psychological subscale (depressive mood, irritability, anxiety and physical exhaustion) were also found to be higher among black women. On the other hand, compared to black women non-Afro-Colombian ones presented more bladder problems (24.9% vs. 14.9%, p=0.005). Del Prado M concluded that the higher score was given by the psychological domain (7.7 + 4.4), followed by the somatic domain (5.8 +/- 3.5). The urogenital domain had the lowest score (2.7 +/- 2.9). On the other hand, Chedraui P showed that the 5 most frequent symptoms of the 11 composing the MRS (n=300) were: muscle and joint problems (77%), depressive mood (74.6%), sexual problems (69.6%), hot flushes (65.5%) and sleeping disorders (45.6%). While Waidyasekera H et al concluded that the most prevalent menopausal symptoms were joint and muscular discomfort (74.7%), physical and mental exhaustion (53.9%), and hot flushes (39.1%). Hot flushes, sleep problems, and joint/muscular discomfort showed an increase in prevalence from the premenopausal category to the postmenopausal category (P < 0.05 for all).

The time taken to administer MRS questionnaire ranged from 3 to 7 minutes with a mean of 4.8 minutes in the study. On the contrary, the completion of the Chinese Menopause Rating Scale (CMRS) took 10.30 minutes on average in a study conducted on Chinese population by Wang XY et al.

**Conclusion**

We recommend menopause rating scale as an easily administered tool for evaluation of women with menopausal symptoms and also during their subsequent treatment and follow up. It can play a critical role in objectively evaluating the response to HRT in carefully selected patients.

**References**

Menopause Rating Scale (MRS)                  Syeda  Batool Mazhar and Sabeena Rasheed