Published on 2 October 2013

Health-related quality of life and hormone replacement therapy

The aim of this study was to determine the effect of hormone replacement therapy on the health-related quality of life of postmenopausal women being treated at an outpatient facility in Malta

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With increasing recognition of the limitations of the traditional indicators of health, health-related quality of life (HRQL) has emerged as a pivotal outcome when evaluating the effects of new or existing therapies because the patients' subjective response to therapy can be evaluated.(1) HRQL outcomes have become increasingly accepted because they have equal meaning for the lay public, health professionals and policy makers.(2)

Assessing the impact of a condition on HRQL is particularly relevant in symptomatic conditions such as the menopause.(2) Around the menopause, changes at several levels may affect mental health: hormonal and menstrual changes, the occurrence of vasomotor symptoms, and psychological reactions.(3) In addition, postmenopausal women have to deal with the transition into mid- and later life and loss of reproductive potential.(4) Other difficulties include social stresses, such as children leaving home, problems at the workplace, marital stresses relating to midlife transition, and physical illness of self, partner or parents.(5)

HRQL assessments have many potential applications in clinical practice, in the evaluation of hormone replacement therapy (HRT).(2) First, they represent a useful tool for screening and monitoring the initial response and general progress of patients treated with oestrogen.(2) Dose–response interactions may be followed in relation to changes in HRQL, in order to decide the optimal treatment strategy for each individual.(2)

Second, by using HRQL data, clinicians can provide their patients with extensive information on different treatment options and thereby motivate patients to comply with the prescribed regimen.(2) Third, HRQL outcomes can suggest the most appropriate therapy from a cost perspective.(2) This is of great importance, given the increasing concern with regard to cost containment in healthcare.

The efficacy of oestrogen therapy in relieving vasomotor symptoms is well documented6 but the effect of HRT beyond symptomatic relief and secondary benefits affecting mood has seldom been evaluated.(1) Few attempts have been made to incorporate standardised HRQL questionnaires when evaluating the effects of HRT on the HRQL of postmenopausal women.

The aim of the study was to determine the effect of HRT on the HRQL of postmenopausal women, by assessing any differences, if any, in the HRQL of women not taking HRT, those taking the treatment and women who had taken oestrogen therapy in the past but had now ceased.

Method

Women aged between 45 and 65 years, attending Gynae-Outpatients' Clinic, at St Luke's General Hospital, under the care of a consultant obstetrician and gynaecologist, were included. All women were either at least 12 months past their last menstruation or had undergone a gynaecological intervention such as a

hysterectomy and/or a bilateral oophorectomy. The women were either going through natural or surgical menopause. Postmenopausal women who were being treated, had never been treated, or had been previously treated with HRT but had now ceased to do so, were all eligible to participate.

Postmenopausal women suffering from any chronic disease state were excluded, owing to the possibility of such a condition potentially having an effect on HRQL. Women taking medication other than HRT to relieve any symptoms or long-term effects of oestrogen deficiency were not eligible to participate in the study. Such medications included:

- beta-blockers
- bisphosphonates
- calcitonin
- calcitriol
- calcium supplements
- clonidine; folate supplements
- herbal medications, namely, evening primrose oil and ginseng
- methyldopa
- selective oestrogen receptor modulators
- phytoestrogens
- tibolone
- vitamins A, B6, D and E.

Demographic data, namely, age, date of last menstrual period, occurrence or absence of other disease states, and use or otherwise of HRT, were recorded prior to inclusion of the postmenopausal women into the study, so as to exclude any subjects who may have been inappropriate candidates. Volunteered participants who met the inclusion criteria were then interviewed, while they were waiting to be seen by their gynaecologist.

Postmenopausal women belonging to either one of the three study groups, namely, never, current, or former HRT users, were randomly included in the observational study throughout a three-month period.

For HRQL assessment, The Medical Outcomes Study (MOS) 36-item Short-Form Health Status Survey (SF-36) served as a basis for obtaining a comprehensive evaluation of the multidimensional aspects of HRQL. In addition, a disease-specific measure – the Women's Health Questionnaire (WHQ) – was also used to address the particular problems induced by the postmenopausal period. Each participant completed two HRQL questionnaires, namely the SF-36 and the WHQ, by interview. This mode of administration was adopted because it leads to a higher response rate and allows for inclusion of participants who are illiterate.

The transformed scale scores of each of the eight individual SF-36 scales were grouped into the three study groups, that is, never, current, and former HRT users. This was done to carry out an ANOVA test, using Microsoft Excel '97, for each of the eight SF-36 scales to determine whether there was any statistically significant difference in the HRQL of the three groups. The same procedure for data handling was undertaken for the WHQ scales.

Results

A total of 77 postmenopausal women were included in the study: 39 had never taken HRT, 29 were current users and 9 had taken oestrogens in the past but had now ceased to do so.

The HRQL of the postmenopausal women belonging to the three study groups determined by the generic HRQL measure in terms of the individual SF-36 scales is shown in Figure 1.

Although the WHQ is a sensitive and a more responsive measure when evaluating HRQL in the postmenopausal period as compared with the SF-36, the HRQL scores obtained did not exhibit any

statistically significant difference between the three study groups, in terms of the individual nine WHQ scales ($p>0.05$; <0.95).

The HRQL scores obtained did not exhibit any statistically significant difference between the three study groups, in terms of the individual eight SF-36 scales ($p>0.05$; <0.95).

The HRQL of the postmenopausal women belonging to the three study groups determined by the menopause-specific HRQL measure in terms of the individual WHQ scales is shown in Figure 2.

Discussion

The HRQL of the postmenopausal women taking HRT was not found to be superior to that of women who had never been treated or who had previously been treated with oestrogen replacement therapy. This was shown both in terms of the generic and the menopause-specific HRQL measures used in the study.

Although several investigations have shown improvement in the HRQL after HRT, this usually occurred in women with vasomotor symptoms.(1,2,7–9) In fact, a study carried out to investigate the effects of HRT on well-being on postmenopausal women without vasomotor complaints showed that there was no change in the general wellbeing of postmenopausal women without current or previous vasomotor symptoms.(4) This may explain why no statistically significant difference was observed between the three study groups – because the participants were not asked or assessed in any way with respect to whether they were suffering or had suffered from vasomotor symptoms. Therefore, postmenopausal women without current or previous vasomotor symptoms may have been included in the study.

The possibility of the inclusion of participants in the study without vasomotor complaints may only partially explain the lack of any improvement in the postmenopausal women's HRQL in those taking HRT. This is because not all studies have shown that vasomotor symptoms experienced during the menopause affect HRQL.(10,11) Moreover, it has been found that many symptoms that are reported in conjunction with the postmenopausal complaints are psychological in nature.(12)

Studies have found increased psychological symptoms related to the decline in sex steroid hormones and menopausal status.(10–13) Some studies have found no association between menopausal status and depressed mood, anxiety, irritability or wellbeing.(14–17) The so-called 'menopause syndrome' may be more related to personal characteristics than to menopause per se, and expectations, attitudes and lifestyle affect the psychological experience.(10,11,14–21) It has been demonstrated that postmenopausal women with better coping skills suffer less from psychological symptoms.(18) The only category of menopausal status with an impact on the risk of depression was found to be surgical menopause.(16,17) Although surgical postmenopausal women were included in this study, no improvement in the HRQL was noted, because this category represented a small group of the total study population.

Most of the postmenopausal women taking HRT were women with an intact uterus; therefore the HRT preparation included a combination of progestogen and oestrogen. It has been found that progestogen may cause unfavourable effects on mood and wellbeing,(19) which could account for the lack of improvement in the HRQL of the postmenopausal women taking HRT. However, no clear-cut conclusions can be drawn because it has been shown that the effect of progestogen on the HRQL of postmenopausal women depends on the type of progestogen, dosage and individual sensitivity.(20) Furthermore, studies have shown that progestogen does not interfere with the improvement in the HRQL caused by oestrogen.(1,8)

One major limitation of the study was the small sample size (n=77). The HRQL methodological approach of the study involved two HRQL measures that took approximately 20 minutes for every woman interviewed. A different methodological approach involving the adoption of other measures or a single HRQL instrument is not a plausible solution to augment the sample size. Both the SF-36 and the WHQ HRQL measures, among the other generic and menopause-specific instruments, were chosen because of their brevity. Moreover, the use of a single instrument is not recommended because studies that investigated the effects

of oestrogen therapy on HRQL have adopted a methodological approach that combines both generic and specific measures, to ensure both comprehensiveness and scope.(1,8,9)

The other alternative to increase the sample size was to use a different mode of administration of the HRQL measures. Instead of administering the two HRQL measures by direct patient interview, the self-administered mode of administration could have been used because it is less time consuming. However, the latter may lead to a low response rate, missing items and misunderstanding, unlike the interview mode of administration. In view of the disadvantages associated with self-administration of the HRQL questionnaires, the direct patient interview was preferred.

Another limitation of the study was that the methodological approach did not address whether the study participants were suffering or had suffered from vasomotor symptoms. The inclusion of some form of clinical assessment to assess the latter would have been appropriate because many studies have shown an improvement in the HRQL only in those postmenopausal women with vasomotor symptoms. The Kupperman Index might have been an appropriate measure to be included in the study because it rates the occurrence and intensity of vasomotor complaints.(21)

Conclusions

The results from this study indicate that the impact of HRT on HRQL may require an individual approach, which also goes beyond whether or not vasomotor symptoms are present.

Key points

- Assessing the impact of a condition on HRQL is particularly relevant in symptomatic conditions such as the menopause.
- The HRQL scores obtained did not exhibit any statistically significant difference between the three study groups: never, current and former HRT users.
- The so-called 'menopause syndrome' may be more related to personal characteristics than to menopause, and expectations, attitudes and lifestyle affect the psychological experience.
- A limitation of the study was the small sample size. The impact of HRT on HRQL may require an individual approach and goes beyond whether vasomotor symptoms are present or not.

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