Original Article

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Comparison of Menopausal Symptoms and Quality of Life after Natural and Surgical Menopause

Neha Mahajan[1], Dinesh Kumar[2], Perveena Fareed[3]

[1]Registrar, Department of Obstetrics and Gynecology, Lal Ded Hospital, Government Medical College, Srinagar, Jammu and Kashmir, India, [2]Associate Professor and Head, Department of Community Medicine, Government Medical College, Jammu, Jammu and Kashmir, India, [3]Registrar, Department of Obstetrics and Gynecology, Lal Ded Hospital, Government Medical College, Srinagar, Jammu and Kashmir, India.

Abstract

Background: Estrogen deficiency, whether arising from surgical or natural menopause, can have both medical and psychological adverse consequences for a woman's health and well-being, that is, her health-related quality of life (QOL).

Aim and Objective: This study was undertaken to determine the menopause-related symptoms and its impact QOL of women at surgical menopause with that of women at natural menopause.

Materials and Methods: A cross-sectional study was carried among 192 women at surgical and 200 women at natural menopause, attending the Outpatient Department in the SMGS hospital, and a house to house survey infield practice area of Government Medical College, Jammu by interviews with the help of a pretested semi-structured standard questionnaire. For assessment of the menopausal symptoms menopause rating scale (MRS) and for QOL World Health Organization (WHO) QOL-BREF questionnaire was used.

Main Outcome Measures: Total MRS along with the subscale scores and the total WHOQOL-BREF along with the individual domain scores were compared between the two groups.

Results: There was a significant difference between the MRS total scores of the women at surgical (16.47 ± 7.74) and natural (12.82 ± 5.60) menopause group. The somatic, psychological and urogenital symptoms were high in women at surgical menopause than at natural menopause. The mean transformed scores (0-100) of physical health, psychological, social relationships, and environmental domains was more in natural than the surgical menopause group.

Conclusion: The high individual and subscale scores of MRS were observed in both natural and the surgical menopause group. The severity of symptoms was found more distressing for surgical menopause group. The QOL in women at natural menopause where the symptoms experienced were less severe is average and better than the QOL in women at surgical menopause having severe menopause symptoms.

Key words: Menopause, Natural menopause, Post menopause, Quality of life, Surgical menopause

INTRODUCTION

Menopause is the permanent cessation of menstruation resulting from reduced ovarian hormone secretion that occurs either naturally or is induced by surgery, chemotherapy, or radiation. Natural menopause can be recognized after 12 months of amenorrhea that is not associated with a pathologic cause.[1] Surgical menopause is the cessation of menses resulting from surgical removal of the uterus, leaving one or both ovaries, or the removal of both ovaries.[2] Estrogen deficiency, whether arising from surgical or natural menopause, can have both medical and psychological adverse consequences for a woman's health and well-being, that is, her health-related quality of life (HRQOL).[3] HRQOL evaluates the patient's satisfaction with a level of function. It represents the functional effects of illness and its treatment on a woman, as she perceived herself.[4] Of late, the concept of "QOL" has gained much popularity, with increasing number of clinicians incorporating HRQOL scales into both routine

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Corresponding Author: Dr. Neha Mahajan, Department of Obstetrics and Gynecology, Lal Ded Hospital, Srinagar - 190 001, Jammu and Kashmir, India. Phone: +91-9419270131. E-mail: doctor3086@gmail.com

practice and research.[3] The QOL is defined by the World Health Organization (WHO) as "individuals' perception of their position in life in the context of the culture and value systems in which they live, and about their goals, expectations, standards, and concerns." QOL is a broad concept which incorporates in a complex way the person's physical health, psychological state, the level of independence, social relationships, personal beliefs, and relationships to the physical environment.[5]

Various studies existing have indicated that menopause has been negatively related to QOL.[6-9] This realization has led the researchers to consider incorporation of QOL in clinical practice, but most studies on QOL of postmenopausal women are from developed countries. Very scarce information exists about QOL of postmenopausal women in developing countries like India with hardly any study comparing the surgical with the natural menopause.

Hence, this study was undertaken to determine the menopause-related symptoms and its impact on QOL in postmenopausal women with natural and surgical menopause.

MATERIAL AND METHODS

A cross-sectional study had been conducted in 2013-2014 in the SMGS Hospital, Government Medical College Jammu and in the field practice area Ranbir Singh Pura. The study population was all patients with either natural or surgical menopause. The following women had been excluded in the study:

1. Who had already taken some form of estrogenic preparations in the preceding months
2. Who had severe medical disorders, such as renal, liver or cardiac disease, uncontrolled diabetes, or hypertension
3. Who were taking psychotropic medications
4. Who had undergone radical surgeries for malignancy
5. And who had a history of psychiatric disorders.

The group of women at surgical menopause comprised of all those who came to the Outpatient Department twice a week for gynecological follow-up during the specified period while a house to house survey had been conducted in the rural field practice area in a village; which was selected randomly to select the women at natural menopause. All women were interviewed by us with the help of a pretested semi-structured standard questionnaire.

Information regarding socio-demographic profile and reproductive parameters (such as parity, the age of menarche, regularity of menses, the age of menopause (natural or surgical), and years since last menstruation were recorded by us.

For assessment of the menopausal symptoms menopause rating scale (MRS),[10] was used. MRS is an 11-item questionnaire comprising three independent dimensions: Psychological, somatic, and urogenital subscale. Each of the 11 symptoms in MRS can get 0 (no complaints) or up to 4 scoring points (severe symptoms) depending on the severity of the complaints perceived by the women while completing the scale. By adding up the scores of each item of the respective dimensions, the composite scores for each of the subscales is calculated. The composite score (total score) is the sum of the dimension scores, and it is proportional to the severity of subjectively perceived symptoms.[11]

WHOQOL-BREF questionnaire in English version[12] translated to local language was used for the assessment of HRQOL. The scores had been calculated according to the standard methods, and the raw scores were converted to transformation scores. The first transformation converts scores to the range of 4-20 and the second transformation converts domain scores to 0 to 100 scales. Higher scores reflect better QOL. The WHOQOL-BREF contains 26 items which are categorized under four main domains, i.e., physical, psychological, social, and environmental.

For the measurement of each item a separate 5 point scale ranging from never (4) to always (0 points) was used. Total score of each domain was 108. The higher score indicated a good QOL and the lower score indicated a poor QOL with high effect of menopausal symptoms on QOL. Those who obtained 0-33.3% scores were considered poor QOL, scores from 33.3 to 66.7% were taken as average QOL, and more than 66.7% scores were considered to have good QOL.

Statistical analysis

The data analysis was performed by computer software MS Excel and SPSS Version 21.0 (SPSS IBM Chicago Inc.) for windows. The quantitative variables are presented as the mean and the standard deviation. Menopausal symptoms are presented as percentages. Statistical differences between the groups are evaluated using Student "*t*" test. A $P < 0.05$ had been considered statistically significant. All *P* values reported are two-tailed.

RESULTS

As is evident from Table 1 both the groups were almost similar in characteristics on age, marital status, parity and age of menopause but there was a little difference in the

Table 1: Distribution of women at natural and surgical menopause according to age, marital status, parity, age at menopause and years since last menstrual period

Characteristic	Menopausal women		Statistical inference
	Natural (*n*=200)	Surgical (*n*=192)	
Age (in years)			
Mean±SD	53.2±6.20	54.4±6.65	*t*=−1.78 *P*=0.10 (NS)
Marital status			
Married	180 (90.00)	171 (89.06)	Chi-squared$_1$=0.09
Widowed	20 (10.00)	21 (10.94)	*P*=0.76 NS
Parity status			
P1 and P2	44	27	Chi-squared$_2$=4.84
P3-P5	139	142	*P*=0.08 NS
P6 and above	17	23	
Age of menopause (years)			
Mean±SD	45.8±3.84	45.0±4.14	*t*=−1.83 *P*=0.06 (NS)
Years since last menstrual period (years)			*t*=−3.06 *P*=0.02 (Significant)
Mean±SD	5.36±0.37	6.75±0.48	

NS: Not significant, SD: Standard deviation

Table 2: Comparison of women at surgical and natural menopause according to menopause rating scale

Menopause rating scale	Menopausal women *n* (%)		Statistical inference
	Natural (*n*=200)	Surgical (*n*=192)	
Psychological subscale	4.66±2.89	6.37±4.02	*t*=4.846 *P*≤0.001 (HS)
Somatic subscale	4.78±2.56	6.23±3.53	*t*=4.678 *P*≤0.001 (HS)
Urogenital subscale	3.37±2.40	3.86±2.70	*t*=−1.915 *P*=0.056 (NS)
Total score	12.82±5.60	16.47±7.74	*t*=−5.378 *P*=<0.001 (HS)

NS: Not significant, HS: Highly significant

Table 3: Comparison of menopausal women from surgical and rural areas according to WHOQOL-BREF raw score

WHOQOL-BREF raw score	Menopausal women *n* (%)		Statistical inference
	Natural (*n*=200)	Surgical (*n*=192)	
Domain 1: Physical health	27.39±5.23	25.07±3.90	*t*=4.98 *P*≤0.001 (HS)
Domain 2: Psychological	22.01±3.58	20.49±3.80	*t*=4.070 *P*=<0.001 (HS)
Domain 3: Social relationships	9.64±2.81	8.56±2.69	*t*=3.87 *P*≤0.001 (HS)
Domain 4: Environment	31.09±6.35	27.67±5.29	*t*=5.77; *P*≤0.001 (HS)

HS: Highly significant, WHOQOL: World Health Organization quality of life

years since last menstrual period though the difference was statistically significant but not much clinically.

As shown in Table 2. There was a significant difference between the MRS total scores of the natural (12.82 ± 5.60) and surgical (16.47 ± 7.74) group. The somatic, psychological and urogenital symptoms were more in surgical menopausal women than in natural menopausal women. However for urogenital subscale, the results were not statistically significant.

As evident from the Table 3 the mean raw scores of physical health, psychological, social relationships and environmental domains is more in natural than the surgical menopause group, and the result is statically highly significant. The mean transformed scores (0-100) including the physical health, psychological, social relationships, and the environmental domains are more in the natural menopause group than the surgical menopause group.

DISCUSSION

The aim of this study was to compare the effect of menopause on the QOL in two groups of women undergoing natural and surgical menopause. For the surgical menopause, hysterectomy itself may affect the QOL. To reduce this potential confounding effect in this study, the sample had been restricted to women who had undergone the surgery for benign gynecological conditions. Studies have shown that in the majority of women suffering from benign gynecological conditions, QOL is improved within a month after hysterectomy; furthermore, such surgery does not appear to produce any psychological disturbance in otherwise psychologically healthy women.[13] No doubt, years of painful periods or severe pelvic pain, for example, may motivate a woman to undergo surgery, and in such cases, an improvement in mood and a drop in the incidence of psychiatric morbidities can be due to the relief of these distressing gynecological symptoms. Nonetheless, an association between psychological and gynecological problems has been recognized for a long time.

The symptoms of estrogen deficiency reduce a woman's QOL.[14,15] Surgical menopause causes a sudden drop in estrogen levels. In contrast, a woman at natural menopause passes through a phase of fluctuating hormone levels, and although a majority of these women report bothersome symptoms when questioned, only a few of these relate to the hormonal changes of the menopausal transition.

The present study revealed that proportions of menopausal symptoms were significantly high in both in the natural and surgically menopausal women. The findings of the present study showed that the women with the surgical menopause suffered from severe different menopausal symptoms such

as: Hot flushes, musculoskeletal and sweating symptoms as well as Depressive Mood, Anxiety, and Sleep problems as compared to women with natural menopause. It has also been depicted that the surgical menopause, as compared with natural menopause, was associated with more severe psychological and somatic symptoms which are in concordance with the studies made by Benshushan *et al*.,[16] and Bhattacharya and Jha.[17]

It is worth mentioning that the urogenital symptoms including sexual problems, bladder problems, and dryness of vagina were less frequent in both the groups; the individual and overall scores of MRS were also low for urogenital domain especially more so in women with surgical menopause but the difference was not found to be statistically significant in concordance with Bhattacharya and Jha,[17] but their result was statistically significant.

In this study, we have found the WHOQOL-BREF scores for all domain lower for women with surgical menopause, i.e., the women at surgical menopause showed a considerably worse QOL in the physical health, psychological, social relationships, and the environmental domains of the WHOQOL-BREF questionnaire when compared to their natural menopause counterparts and the results were significant statically.

Our study shows that an acute drop in estrogen levels in women, i.e., the women with surgical menopause have more severe menopausal symptoms and have a significantly worse effect on QOL than a slow drop. However, further studies are required to clarify the role of hormones in producing the menopausal symptoms and their effect on QOL.

CONCLUSION

The QOL was found to be significantly worse in surgical menopause group. Ratings on all three of the MRS sub-scales was higher, and all four WHO-QOL subscales were significantly lower (reflecting worse symptoms) in the group experiencing the acute drop in estrogen level induced by surgical menopause than the one with slow drop, i.e., the natural group. Therefore, we agree with the current recommendation that healthy premenopausal ovaries should be retained by surgeons, if there is no family history of ovarian cancer or when the woman is not suffering from an estrogen-dependent disease such as endometriosis. The short- and potentially long-term consequences of the routine practice of oophorectomy at hysterectomy should be considered. Hormone replacement therapy needs to be recommended as and when required. However, HRT alone cannot help unless accompanied by regular exercise, proper diet, social interaction, mental occupation, and medical therapy whenever indicated.

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