



RESEARCH ARTICLE

POSTMENOPAUSAL SYMPTOMS – A NIGHTMARE FOR FEMALES!! A COMPARATIVE STUDY OF
SURGICAL & NATURAL MENOPAUSE

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ABSTRACT

Introduction: Globally women face physiological and psychological health problems after midlife due to menopause. Women who have had surgical menopause experience the same symptoms caused by natural menopause; but more intensely and frequently due to the abrupt halt in estrogen production. So, premenopausal women who undergo surgical menopause may have symptoms that require treatment.

Objectives: To determine the differences in severity of menopausal symptoms in women with natural and surgical menopause.

Diagnostic use: The Scales designed can also be used to identify menopausal women who are severely and possibly clinically anxious and/or depressed.

Method: Study design: Comparative and statistical study.

Sample size and participants: All consenting females coming with postmenopausal complaints (either natural or surgical) to gynecology OPD of IGGMC, Nagpur between July to December 2015 (138 cases)

Results: A total of 138 post menopausal women were questioned, out of 138, 73 women achieved natural menopause and 65 were hysterectomized females. Severity of different psychological symptoms, physical symptoms, vasomotor symptoms and libido changes were studied grossly and were proven to be statistically significant using chi sq. scale. A p value < 0.05 was taken to be statistically significant. Number of females with surgical menopause experience the Psychological (66%) and physical (73%) symptoms severely than women achieving menopause naturally (14.28% and 16.32% respectively). Number of females with surgical menopause experience the vasomotor symptoms (73%) and Libido changes symptoms severely (65%) than women achieving menopause naturally (35%).

Conclusion: Women with surgical menopause experienced all climacteric symptoms evaluated in this study more intensely and frequently as compared to women who underwent natural menopause.

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INTRODUCTION

Globally women face physiological and psychological health problems after midlife due to menopause. Menopause syndrome has been reported to be a worldwide women's mental health problem. It results in physiological and psychological difficulty that might need to be managed by medical and psychological intervention. From last few decades surgical menopause have come into the picture. Surgical menopause is caused by the removal of both ovaries (oophorectomy), which stops the process of estrogen production. Normally as ovaries age, less estrogen is produced and natural menopause begins. This process allows a woman's body to adjust to estrogen changes over time. Menopausal symptoms include hot flashes, depressive mood, irritability, anxiety, libido changes, vaginal dryness, joint and muscular discomfort etc. It has been suggested that estrogen deficiency may increase the susceptibility for such symptoms. Women who have had surgical menopause can experience the same

common symptoms caused by natural menopause; however, they may feel them more intensely and frequently due to the abrupt halt in estrogen production. So, premenopausal women who undergo surgical menopause may have symptoms that require treatment.

Transition to Menopause (Natural menopause)

The determinants of the age of natural menopause remain unknown, although it is generally accepted that both the number of oocytes formed during fetal development and the rate of ovarian follicular atresia during life are important (Cramer et al., 1995). There are two explanations for the mechanism that triggers the menopausal transition. One perspective is that the impending exhaustion of the follicle endowment triggers the menopausal transition; the hypothalamic/pituitary changes that accompany menopause are a consequence of diminished ovarian function. The Erickson et al. (1995) believe that the primary mechanism by which the primordial follicle endowment is depleted is through the onset of follicular growth. The major factor in determining the rate at which follicles begin to grow is the number of follicles in the

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primordial endowment. Other explanation (Blumel *et al.*, 2011) for the mechanism that triggers the menopausal transition is that age changes in the central nervous system (CNS) trigger the menopausal transition: the exhaustion of the follicular endowment is a consequence of altered CNS signals. In support of this contention is the fact that, in rats there are changes in the CNS component of the reproductive axis long before the ovary has substantially reduced follicles. It could be postulated that destabilization of the ovarian-CNS feedback relationship, triggered by aging of the CNS, leads to conditions that cause degeneration of primordial follicles in situ (without growth) and depletion of the primordial endowment. Several studies suggest that menopause results from aging of the hypothalamus. In old ages, the hypothalamus is incapable of tightly regulating the secretion of gonadotropins from the anterior pituitary. Thus, there is transient increase in the levels of both LH and FSH. These transient increases in LH and/or FSH are thought to be toxic to the ovary and exacerbate normal depletion of the primordial follicle pool. While in surgical menopause transition to menopause is instant and abrupt due to removal of ovaries abruptly by surgical procedure, hence body don't get time for adaptation to falling hormonal concentration of body and hence women experience postmenopausal symptoms as mentioned above immediately and more severely.

How is surgical menopause different from natural menopause?

- Surgical menopause occurs very suddenly; one day a woman is having menstrual cycles, and the next day, after surgery, she is postmenopausal. Women with natural menopause have a gradual transition that can take many years. The average age of natural menopause is 45-51 yrs.
- Women with surgical menopause often experience more intensity in their symptoms than women with natural menopause.
- Women with surgical menopause are younger than women with natural menopause.
- Women with surgical menopause are recovering from major surgery when it begins; they have to heal both physically and mentally to adjust to the sudden change.

With this perspective this study was done to access the severity of menopausal symptoms in natural and surgical menopause patients.

Aims and Objectives

1. To determine the differences in severity of menopausal symptoms in women with natural and surgical menopause.
2. Diagnostic use: The Scales designed can also be used to identify menopausal women who are severely and possibly clinically anxious and/or depressed.
3. To provide a brief but comprehensive and valid measure of climacteric symptomatology.
4. To make women aware about climacteric symptoms and its severity and seek early medical consultation.

MATERIALS AND METHODS

Study design: Comparative and statistical study.

Study setting: OPD, Gynecology and obstetrics, IGGMC and Mayo Hospital

Sample size and participants: All consenting females coming with postmenopausal complaints (either natural or surgical) to gynecology OPD of IGGMC and Mayo hospital, Nagpur during the months of July to December 2015 (138 cases)

Subject selection

Inclusive criteria

1. All female achieving menopause naturally and surgically.
2. In women with surgically achieved menopause, coming with complaints of menopausal symptoms.
3. Women with the absence of menstrual periods for 12 consecutive months (without a known cause, such as surgery, illness, or medication).

Exclusive criteria

Women in whom hysterectomy done for malignancies.

Methodology

Institutional Ethics Committee approval was taken 138 Women included in the study who attended Gynecology OPD of Indira Gandhi Government medical College, data is collected through an interviewer administered questionnaire and menopausal symptoms: score sheet, to compare the severity of symptoms in natural and surgical menopause.

Climacteric SCALE (Greene, 1976; Greene, 1984; Greene, 1990; Greene and Cooke, 1980)

The climacteric Scale were used for brief measure of menopause symptoms. It is used to assess severity of different symptoms.

Three main areas are measured:

1. Psychological.
2. Physical.
3. Vasomotor.

Administration and scoring

The Scale is designed for completion by the subject, but if desired or necessary, it could be used in the form of a structured interview. Each symptom is rated by the subject according to its severity using a four point rating scale.

Scores are assigned as follows:

- Not experienced = 1
- Mild = 2 (symptom experienced for a short time period, no interference with work, recovers itself, no medication needed)
- Moderate = 3 (symptom experienced, unable to do task, recovers after taking rest for few hours, no medication needed)
- Severe = 4 (symptom experienced, unable to do task, recovers after taking rest and medication)

Data analysis

- Statistical analysis was done using EPI INFO software. The CHI SQ. TEST was done to determine in between two groups i.e. natural menopausal females and surgical menopausal females, significance of difference. The significance level for the study was $p < 0.05$

OBSERVATIONS AND RESULTS

A total of 138 women were asked to fill up the Proforma and consent, out of 138, 73 women achieved natural menopause and 65 were hysterectomized females. Data collected based on the Proforma filled by them was analyzed and was statistically calculated and evaluated using climacteric scale and chi sq. scale.

Table 1. Comparison of age for natural and surgical menopause

Age	Natural menopause N=73	Surgical menopause N=65
Mean	47.43	41.86
Standard deviation	7.76	8.08

Multiple fibroids and severe DUB's are the main cause of removal of uterus as well as bilateral oophorectomy, hence explaining the main reason for early age i.e. 42yrs for surgical menopause as compared to age 47yrs for natural menopause.

Table 2. Comparison of severity of psychological symptoms in females achieving natural and surgical menopause

Severity of symptoms	Natural menopause N=73	Surgical menopause N=65	Total
Severe	5	30	35
Not severe	68	35	103
Total	73	65	

- A total score of ≥ 21 of addition of all psychological symptoms using climacteric scale is considered severe
- Psychological symptoms includes the symptoms like sleep problems, tension, depressive moods, irritation, crying spells, lack of concentration etc.
- As these are psychological symptoms many of these are not even treated with medication and can lead to disturbed lifestyle. Hence their diagnosis and treatment is required as early as possible.

BY CHI SQ. SCALE $p=0.0000011758$

The difference in percentage of severity of psychological symptoms among females with surgical menopause (66.01% severe) and natural menopause (14.28%) is found to be statistically significant.

Table 3. Comparison of severity of depressive moods in females achieving natural and surgical menopause

Severity of symptoms	Natural menopause n=73	Surgical menopause n=65	Total
Severe	24	41	65
Not severe	49	24	73
Total	73	65	

Depressive mood was most common complaint in post menopausal women

A total score of ≥ 3 of depressive moods is considered severe

By CHI-SQUARE TEST $p=0.0003885$

The difference in percentage of severity of depressive moods amongst females achieving surgical menopause (63.07%) and natural menopause (36.9%) is found to be statistically Significant.

Table 4. Comparison of severity of physical symptoms in females achieving natural and surgical menopause

Severity of symptoms	Natural menopause n=73	Surgical menopause n=65	Total
Severe	08	41	49
Not severe	65	24	89
Total	73	65	

These include the symptoms like hot flushes, night sweating, vaginal itching and dryness, muscular cramps and lack of energy. Menopausal women most commonly experience hot flushes with easy fatigability due to lack of energy

A total score of ≥ 21 of addition of all physical symptoms using climacteric scale is considered severe.

BY CHI – SQUARE TEST $p=0.00000000017$

- The difference in percentage of severity of physical symptoms amongst females achieving surgical menopause (73%) and natural menopause (16%) is found to be statistically significant.
- Vaginal dryness /itching and hot flushes were the most common complaints observed in most postmenopausal females
- **HOT FLASHES:** Hot flashes are the most common menopause symptom. Hot flashes may start in the face with a warm, "flushed" feeling and can cause a sensation of extreme heat in the entire body. Additionally, hot flashes may be accompanied by heavy perspiration and can occur frequently during the night.

Table 4. Comparison of severity of hot flushes as experienced in females achieving natural and surgical menopause

- A total score of ≥ 3 of hot flushes experienced is considered severe
- A total score of ≥ 3 of hot flushes experienced is considered severe

Severity of symptoms	Natural menopause n=73	Surgical menopause n=65	Total
Severe	35	48	83
Not severe	38	17	55
Total	73	65	

By CHI-SQUARE TEST $p=0.0019216$

The difference in percentage of severity of hot flushes experienced amongst females achieving surgical menopause (57.8%) and natural menopause (42.16%) is found to be statistically significant.

Comparison of severity of vaginal dryness as experienced in females achieving natural and surgical menopause

Vaginal dryness/Vaginal itching: A lack of estrogen causes thinning of the vaginal wall and depletes natural vaginal moisture, causing vaginal dryness, burning and discomfort with intercourse. On per vaginal and per speculum examination vaginal dryness was examined.

A total score of ≥ 3 of vaginal dryness experienced is considered severe

Severity of symptoms	Natural menopause n=73	Surgical menopause n=65	Total
Severe	15	47	62
Not severe	58	18	76
Total	73	65	

By CHI-SQUARE TEST $p=0.0000000105$

The difference in percentage of severity of vaginal dryness experienced amongst females achieving surgical menopause (75.8%) and natural menopause (24.19%) is found to be statistically significant.

Table 5. Comparison of severity of vasomotor symptoms in females achieving natural and surgical menopause

These include following symptoms: heart beating quickly and strongly, feeling dizzy and faint, breathing difficulties, headaches, excitability etc.

Severity of symptoms	Natural menopause n=73	Surgical menopause n=65	Total
Severe	6	16	22
Not severe	67	49	116
Total	73	65	

A total score of ≥ 18 of addition of all vasomotor symptoms will be considered severe

BY CHI SQ. TEST $p=0.008629$

The difference in percentage of severity of vasomotor symptoms amongst females achieving surgical menopause (72.72%) and natural menopause (27.27%) is found to be statistically significant.

Table 6. Comparison of libido changes in females achieving natural and surgical menopause

Lack of interest in sex and pain during sex are the two most important symptoms commonly experienced by post menopausal females

Severity of symptoms	Natural menopause n=73	Surgical menopause n=65	Total
Severe	14	26	40
Not severe	59	39	98
Total	73	65	

A total score of ≥ 3 of libido changes is considered severe

By CHI-SQUARE TEST $p=0.0071209$

The difference in percentage of severity of libido changes amongst females achieving surgical menopause (65%) and natural menopause (35%) is found to be statistically significant.

Table 7. Comparison of severity of symptoms in both groups

Symptoms	Natural menopause	Surgical menopause
Psychological symptoms	14.28%	66.01%
Physical symptoms	16.32%	73%
Vasomotor symptoms	27.27%	72.72%
Libido changes	35%	65%

In all the above for symptoms taken grossly, p value came out to be <0.05 hence statistically significant.

DISCUSSION

Menopause syndrome is the most significant and highly individualized syndrome faced by all women of age ranging from 40-50 yrs. The severity and frequency of climacteric symptoms, taken into account in present study (eg: hot flushes, vaginal dryness, lack of concentration, energy loss, depressive moods etc.) varies from women to women and also depends on the type of menopause achieved (natural or surgical). In present study, severe form of depression was experienced by 63.09% of subjects having surgical menopause while only 36.9% with natural menopause experienced severe depression which was statistically significant. The finding was consistent with the study carried out by Hammer *et al.* in 1984 in which depression was positively correlated to severity of psychological symptoms following surgical menopause. In the same study, out of 294 postmenopausal women, vaginal dryness was experienced by 30% of natural menopausal women while 65% of surgical menopausal women experienced discomfort and vaginal tenderness. In present study out of 138 subjects, 73 were natural menopausal women and 65 were surgical menopausal women. Vaginal tenderness and dryness was experienced by 24.19% of natural post menopausal and 75.8% of surgical menopausal females. In 1986, Anita Hagstad *et al.* (Hagstad and Janson, 1986) carried out their study on 1413 women, on urinary incontinence after menopause. According to their study 10% of natural menopausal and 25.6% of surgical menopausal females experienced urine incontinence, while in present study though urinary incontinence is not taken as individual symptom, it is taken into account with physical symptoms, there it is reported that 73% of surgical menopausal females and only 16% of natural menopausal females experienced severe physical/ somatic symptoms. In 1993, Olden have *et al.* (Olden have *et al.*, 1993) suggested that out of 745 women, 90% surgical menopausal females experienced severe hot flashes while only 50% of natural menopausal females experienced severe hot flashes. In contrast in present study on 138 women 57.8% of surgical menopausal females and 42.16% of natural menopausal females experienced severe hot flashes.

Similarly in 1994, Haines *et al.* (1994) reported sweating and Vasomotor symptoms were more intense and frequent in women who underwent surgical menopause. Similar result is observed in present study that sweating and Vasomotor symptoms are statistically significant in women who underwent surgical menopause. Benschushan *et al.* in 2009, evaluated climacteric symptoms by modified Greene's climacteric scale and reported that surgical menopause as compared to natural menopause was associated with severe psychological, vasomotor and somatic symptoms ($p<0.05$). Similar results are obtained in the present study with $p=0.00000011758$ in case of severity comparison of psychological symptoms, $p=0.000000017$ for severity comparison of physical/somatic symptoms and $p = 0.00862$ in

case of severity comparison of Vasomotor symptoms, hence statistically significant. Sexual dysfunction was also reported to be severe in surgical menopausal women ($p < 0.01$) in the above study, similar result is proven in present result by severity comparison of libido changes with $p = 0.00712$. Bunnell *et al* in 2011, carried out his study in Latin American countries and determined using his model that in surgical menopause, intense psychological and severe Vasomotor symptoms persists in post menopausal ages. This is statistically proven in present study also.

Therefore, it is clearly represented in the study using the climacteric scale and chi sq. scale, that surgical menopause is accompanied with more severe climacteric symptoms.

Conclusion

The result achieved shows that females with surgical menopause experience the postmenopausal symptoms: physiological symptoms, physical symptoms, vasomotor changes and libido changes more severely than the females having natural menopause.

Hence it can be Implicated:

- Better understanding of differences in severity of symptoms in females with surgical and natural menopause. This will help in starting and planning of menopausal clinics for the counseling of women undergoing menopause (either kinds) and help them relive from the main symptom of menopause i.e. depression.
- It will be helpful in developing a plan to control or eliminate these menopause-related issues. And will help health care providers to develop a better treatment plan.
- Encourage the use of MHT (menopausal hormone therapy) in India for treating more severe symptoms as in case of women undergoing surgical menopause.
- Suggest different nutritional and healthy dietary plans for women with natural and surgical menopause for a better living.
- A larger study can be carried out on this report taking into account more number of subject, to obtain more appropriate results.

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