

## Health concerns and quality of life in surgical menopause

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### Abstract

**Objective:** To study the health concerns and quality of life in patients with surgical menopause.

**Materials and Method:** The study was conducted on 120 women in the age group 40-50 years who had total abdominal hysterectomy with bilateral salpingo-oophorectomy for benign pathology over a period of 9 months. The patients were followed up for one year after surgery. Their general health quality of life and menopausal symptoms were assessed.

**Results:** Vasomotor symptoms were the most common affecting 68% of patients. Genitourinary symptoms like dyspareunia, vaginal dryness and urinary incontinence affected about 51% of patients. Back aches and joint pains were present in 33% females. Vasomotor symptoms were more prominent in the early menopausal age group (40-45years) while genitourinary and locomotor symptoms were more common in the late menopausal age group (>45years).

**Conclusion:** Surgical menopause leads to severe postmenopausal symptoms. Estrogen replacement should be considered in all symptomatic patients. During hysterectomy for benign pathology, ovaries should be removed only if properly indicated.

**Keywords:** Surgical menopause, Estrogen, Menopausal symptoms, Hot flashes, Salpingo-oophorectomy

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### Introduction

Menopause is an important period in women's life. Due to the increased life expectancy, about 30-35% of a women's life is in the post menopausal period. Quality of life declines during this period due to the various problems associated with estrogen deficiency and ageing. The health concerns and emotional needs of these women should be properly addressed to lead a happy social life.

Surgical menopause occurs after removal of both the ovaries. As there is an abrupt estrogen deficiency, the woman experiences severe post menopausal symptoms. They may require estrogen replacement therapy. As the hysterectomy rates are rising in the perimenopausal age group, these health concerns need to be managed properly.

Surgical menopause is commonly performed during hysterectomy for benign disease, most commonly for fibroids or dysfunctional uterine bleeding.<sup>(1,2)</sup> Another reason to remove normal ovaries at the time of hysterectomy is to reduce the risk of ovarian cancer which is beneficial in women with gene mutations such as BRCA1 or BRCA2 or HNPCC<sup>(3)</sup> and for women with strong family history of ovarian cancer. Other indications for ovarian removal are endometriosis, chronic pelvic pain and premenstrual syndrome

### Benefits of surgical menopause

1. Reduced risk of ovarian cancer in high risk women
2. Reduced pelvic pain in women with endometriosis or dense adhesions around the ovary.

### Adverse effects of surgical menopause

1. Abrupt and more severe onset of menopausal symptoms especially vasomotor symptoms like hot flashes and night sweats.
2. Impaired sexual function due to vaginal dryness and dyspareunia, and decreased libido due to loss of ovarian testosterone production
3. Loss of bone mineral density and increased risk of osteoporosis and fracture
4. Loss of fertility
5. Increased risk of cardiovascular disease
6. Adverse psychological effects like mood swings and depression
7. Impaired cognitive functions due to loss of concentration and decreased memory.

Hormone Replacement Therapy (HRT) may improve vasomotor symptoms and maintain bone density. But the effect of HRT in the relief of other symptoms is not well proven.

### Materials and Method

This prospective cross sectional study was conducted in the department of obstetrics and gynaecology, KMCT Medical College and Sree Mookambika Institute of Medical Sciences, on 120 patients (60 from each centre) who had total abdominal hysterectomy with bilateral salpingo-oophorectomy for benign pathology during November 2012 to July 2013. All the patients were in the age group 40-50 years. Patients who had malignant or premalignant lesions were excluded from the study. They were followed up for a period of one year. Their menopausal symptoms and other health problems were assessed and managed

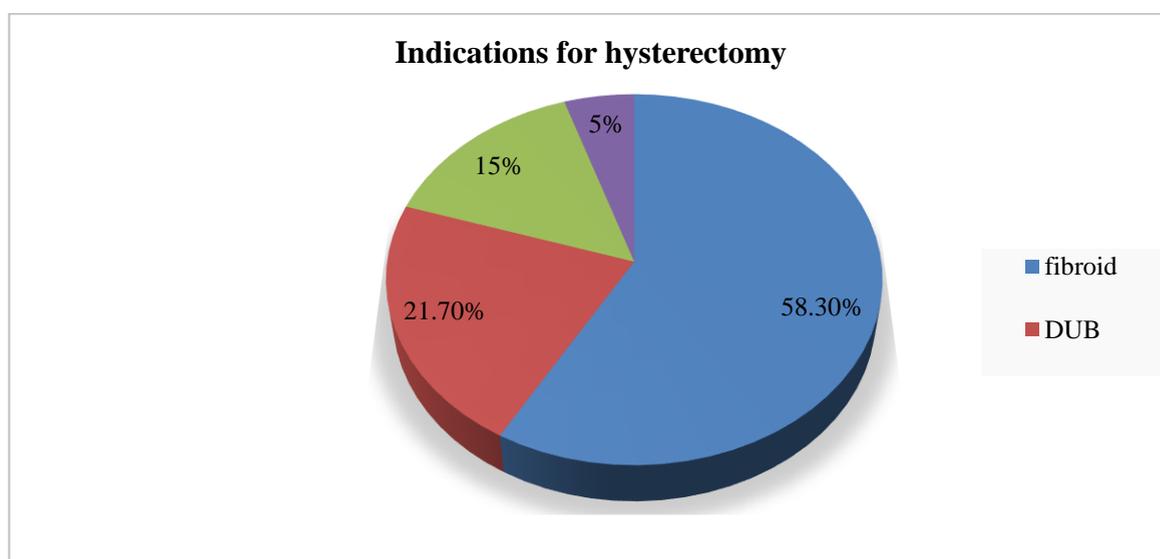
accordingly. The symptoms included vasomotor symptoms like hot flashes, night sweats and sleep disturbances, psychological and mental symptoms like depression, irritability, mood swings, loss of concentration and poor memory, symptoms of sexual dysfunction like vaginal dryness, decreased libido and dyspareunia, somatic symptoms like headache, dizziness and palpitation. Other symptoms studied included breast pain, low back ache and joint pain, urinary incontinence, weight gain and dry itchy skin. The patients were divided into early menopausal (40-45years) and late menopausal group (above45years) and symptom prevalence in each group was studied. Institutional ethics committee approval and informed consent from all the subjects in the study were obtained.

Results were analyzed using SPSS software frequency tables and chi square test.

### Results

Among 120 patients, 68% (82 patients) were in the early menopausal age group (40-45years). 32% (38patients) belonged to 46-50 year age group. The mean age of patients was  $44 \pm 2.97$  years.

The most common indication for hysterectomy was fibroid uterus (58.3%), followed by dysfunctional uterine bleeding (21.7%) and benign ovarian tumors (15%). The other indications were adenomyosis, endometriosis, pelvic inflammatory disease etc. (Fig. 1)



**Fig. 1: Indications for hysterectomy**

During follow up, the most common symptoms were vasomotor disturbances in 68% patients. About 45% patients had hot flashes, 10.8% had night sweats and 18.3% had sleep disturbances. In the early menopause age group(40-45yrs) 56.09% of patients had hot flashes while in late menopause age group only 18.42% had hot flashes, which was significant ( $p$  value  $< 0.0001$ )(Table 1). So in the younger age group, vasomotor symptoms were very prominent and adversely affected the quality of life.

**Table 1: Symptom Profile of Early and Late Surgical Menopause**

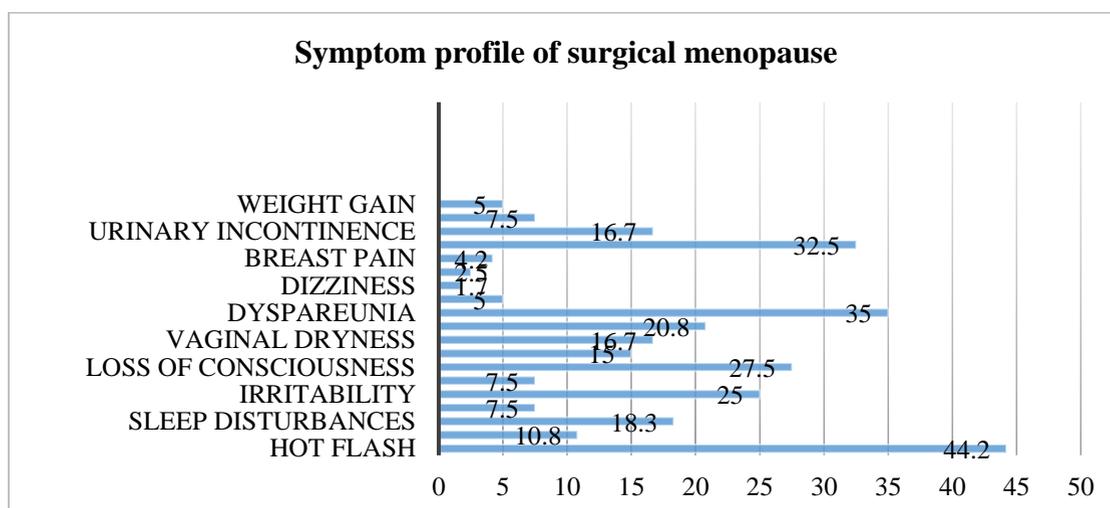
	Early surgical menopause (N=82)	Late surgical menopause (N=38)	P value (Chi square test)
Hot flashes	46	7	$<0.0001$
Night sweats	11	2	0.223
Sleep disturbances	16	6	0.801
Depression	7	2	0.718
Irritability	20	10	0.824
Mood swings	7	2	0.718
Loss of consciousness	18	15	0.051
Poor memory	10	8	0.272
Vaginal dryness	14	6	1
Decreased libido	14	11	0.152

Dyspareunia	29	11	1
Head ache	4	2	1
Dizziness	2	0	1
Palpitation	3	0	0.551
Breast pain	3	2	0.651
Joint pain & back ache	14	25	0.0001
Urinary incontinence	10	10	0.067
Dry skin	5	4	0.462
Weight gain	4	2	1

Symptoms of urogenital atrophy were the second most common (51% patients). Dyspareunia was present in 35% of patients. Around 16.7% patients had vaginal dryness and 20.8% had decreased libido. 60% of patients with dyspareunia belonged to the late menopausal age group. Urinary incontinence was another disturbing symptom, 16.7% of patients had either stress or urge incontinence.

Locomotor symptoms like low backache and joint pain were present in 33% of patients. Five percent of patients had weight gain and 7% of patients had dry itchy skin.

Psychological symptoms were present in 30% of patients. Loss of concentration (28%) and poor memory (15%) had adverse effects on cognitive function. Five to eight percent patients had depression and mood swings. Less than 5% patients had headache, dizziness, palpitation and breast pain (Fig. 2).



**Fig. 2: Symptom Profile of surgical Menopause**

## Discussion

Menopause is the permanent cessation of menstruation due to loss of ovarian follicular function. The average age of menopause is 51 years.

Most of the patients who have any benign lesions of the uterus or ovaries in the perimenopausal age group have both their ovaries removed leading to surgical menopause. In natural menopause there is gradual decline in estrogen production from the ovaries. But in surgical menopause there is abrupt cessation of estrogen production due to removal of ovaries. So the symptoms of estrogen deficiency will be more pronounced and distressing.

Vasomotor disturbances are one of the most common postmenopausal symptom. This is probably due to some dysfunction of central thermoregulatory centres in hypothalamus.<sup>(4)</sup> A hot flash usually lasts for

1 to 5 minutes. There is a sudden heat wave which spreads usually over the upper body and face followed by profuse sweating. Heart rate and skin blood flow is usually increased. Estrogen withdrawal or rapid fluctuation in levels are suspected to be the cause rather than low estrogen levels. So the patients with surgical menopause will have more prominent symptoms. In our study vasomotor symptoms were present in 68% patients. Studies by Gold and associates have shown 90% probability of hot flashes in the first year of surgical menopause.<sup>(5)</sup> Vasomotor symptoms were more in the 40-45 year age group than in patients over 46 years which was statistically significant with p value less than 0.001. Hot flashes night sweats and sleep disturbances were significantly relieved by systemic estrogen therapy. The dose of estrogen was reduced gradually over time to maintain at the lowest possible

dose. For some patients we had tapered and stopped estrogen by the end of one year. In patients with only mild symptoms, life style modification and preparations containing phytoestrogen were given with minimal relief.

More than 50% of patients had urogenital symptoms. Estrogen receptors are present in vulva, vagina, bladder, urethra, pelvic floor muscles and endopelvic fascia. Estrogen deprivation leads to decreased collagen, adipose tissue and water content in vagina. Vagina is more friable and bleeds with minimal trauma.<sup>(6)</sup> There is introital narrowing and stenosis there is decreased lubrication during intercourse. These changes leads to vaginal dryness, itching, irritation, dyspareunia, recurrent urinary tract infections and incontinence. A study by Levine and associates found vulvovaginal atrophy in 57% patients and dyspareunia in 55% patients.<sup>(7)</sup> In our study 35% patients had dyspareunia. Majority were in the late menopausal age group. 16.7% patients had vaginal dryness. Sexual disturbances were very distressing especially in the older age group. Most of them were relieved with lubricants. Patients with persistent symptoms were given local estradiol cream. Almost all the patients had symptomatic relief. Patients with decreased libido (20.8%) did not have much relief with local or systemic estrogen.

Urinary incontinence was seen in 16.7% of patients, of which about 9% were stress incontinence. Thinning of urethral and bladder mucosa leads to urethritis, urge incontinence and increased urinary frequency. Urethral shortening due to atrophy may cause genuine stress incontinence. Sherburn and associates studied hysterectomised postmenopausal females and found 35% prevalence of incontinence.<sup>(8)</sup> In our study only a few patients responded to local estrogen therapy.

About 33% of patients had locomotor symptoms such as low backache and joint pains. This was more in the late menopausal age group (>45years) with a significant p value less than 0.001. Estrogen deficiency leads to accelerated bone resorption which is not balanced by compensatory bone formation.<sup>(9)</sup> This leads to osteopenia and osteoporosis in postmenopausal females leading to aches and pains. Fractures may occur with trivial trauma. Kanis and associates have studied that there is an 8 fold increase in fracture probability from 45 to 85years.<sup>(10)</sup> Most of our patients responded well to calcium and vitamin D supplementation. Only few required systemic estrogen therapy.

Psychological and cognitive symptoms were present in 30% patients. Loss of concentration (28%) and poor memory (15%) was associated with significant cognitive dysfunction. Although there are various risk factors, studies by Halbreich and associates have proved some relationship with decreased estrogen levels.<sup>(11)</sup> Psychological symptoms such a mood swings

and depression were seen in about 5-7% patients. Bachmann and associates have concluded that menopausal hormone changes are associated with significant psychological symptoms.<sup>(12)</sup> Our symptomatic patients received psychological counseling and treatment. Systemic estrogen was not much beneficial.

Somatic symptoms like headache, dizziness and palpitation were observed in less than 5% of patients. Matthews and associates have shown increased cardiovascular adverse effects following menopause.<sup>(13)</sup>

Dry itchy skin was present in less than 5% patients. A study by Wines and associates have shown that after menopause, due to estrogen deficiency there is decreased collagen content and sebaceous gland secretion, loss of elasticity and decreased blood supply to the skin.<sup>(14)</sup> These manifest as dry skin with pruritus.

Weight gain was noted in 5% of patients. Dallman and associates attributed weight gain due to redistribution of body fat leading to abdominal obesity and increased likelihood of diabetes.<sup>(15)</sup>

## Conclusion

Surgical menopause leads to abrupt decline in estrogen production. Vasomotor symptoms like hot flashes, night sweats and sleep disturbances were the most common menopausal symptoms. These symptoms were more prevalent in the early menopausal age group (40-45 years). Genitourinary symptoms like dyspareunia, vaginal dryness and urinary incontinence, and locomotor symptoms like backache and joint pain were also common, mainly in the late menopausal age group(>45years).

Surgical menopause causes a variety of distressing menopausal symptoms which impairs the day to day life of these females. These problems should be addressed properly and appropriate treatment should be given. There should not be any hesitancy in starting estrogen replacement therapy in these patients if indicated. As a preventive aspect, indications for removal of ovaries during hysterectomy for benign conditions should be thoroughly reviewed. Risk verses benefit of removing ovaries for benign conditions should be assessed. Only in those patients with proper benefits, ovaries should be removed at the time of hysterectomy.

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