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Original Research Article

Comparison of the Effects of Phytoestrogen and Conjugated Oestrogen on Vasomotor Symptoms in Surgical Menopause

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Abstract

Background: Menstruation ceasing permanently is referred to as menopause. Women go through a variety of physical, mental, and emotional changes throughout this trimester. Phytoestrogens, a class of chemicals generated from plants that bind to oestrogen receptors and have structural similarities to oestrogen, are used to treat vasomotor symptoms. The goal of the current study was to investigate how phytoestrogen and conjugated oestrogen affected vasomotor symptoms. The purpose of this study is to compare phytoestrogen and low dose conjugated oestrogen for the reduction of vasomotor symptoms in surgically menopausal women.

Method: 128 surgically menopausal women who experienced vasomotor symptoms within six weeks of their recovery were divided evenly into two groups by chance. For 12 weeks, one group received conjugated oestrogen (Premarin) at a dose of 0.625 mg per day, whereas the other received soy isoflavone (70%) at a dose of 100 mg per day (lsoflav CR). Daily self-reports on the episode and intensity of vasomotor symptoms were taken. Up until the end of the 12-week period, evaluations were performed every four weeks.

Results: The 12-week treatment cycle was completed by 52 women in the phytoestrogen group (n=52) and 58 women in the conjugated oestrogen group (n=58). After 12 weeks of treatment, 48 (82.75%) of the women (n=58) in the conjugated oestrogen group experienced considerably fewer hot flashes than the 14 (26.92%) of the women (n=52) in the phytooestrogen group. Only in the conjugated oestrogen group, 38 (65.51%) of the women (n=58) reported fewer night sweats. Both groups were deemed to be quite safe and well-accepted, with the exception of a few minor adverse effects in the conjugated oestrogen group such nausea, breast soreness, headache, etc.

Conclusion: Contrary to phytooestrogen, conjugated oestrogen significantly decreased the severity and occurrence of vasomotor symptoms in surgical menopause, and both phytooestrogen and conjugated oestrogen were shown to be well tolerated and safe over the course of a 12-week research.

Keywords: Phytooestrogen, Menopause, Conjugated Oestrogen, Vasomotor Symptoms.

Introduction

Despite being a physiological process, menopause happens to all women beyond the age of 60. A hysterectomy is linked to a menopause that starts sooner[1]. Even earlier menopause onset is linked to hysterectomy with unilateral oophorectomy[2]. It is currently thought that it can be linked to both short-term, life-threatening symptoms like vasomotor symptoms and long-term, life-threatening symptoms such cardiac conditions and osteoporosis[3]. In all three historical eras—classical, mediaeval, and modern it appears that 50 years has maintained the modal age.

Women did not typically live past menarche in classical periods, which is the main distinction between the age of menopause in those eras and that of today's industrialised nations. But the average life expectancy for women has dramatically increased in the modern era. Nowadays, women are living well into their 80s and 90s after menopause. Therefore, it is no longer permissible to write off these issues as the unavoidable side effects of ageing and say that the only necessary treatments are empathy and emotional support.

Worldwide studies have now established that oestrogen insufficiency is to blame for both the long-term and short-term effects, and it has been conclusively established that the advantages of HRT outweigh the risks.

Oestrogen supplementation has been demonstrated to be useful in treating vasomotor symptoms, which are a short-term side effect of menopause and are more common and severe in surgical menopause[4]. Both phytooestrogen and conjugated oestrogen are used to treat vasomotor complaints.

Material and Methods

From January 2021 to December 2021, a prospective, intention to treat, randomised controlled study was conducted in the Obstetrics and Gynaecology Department at Darbhanga Medical College and Hospital, Laheriasarai, Bihar. In total, 128 surgically menopausal women who underwent bilateral salphingoopherectomy and total abdominal hysterectomy (TAH with BSO) for a variety of reasons and complained of vasomotor symptoms were included in this study. Women having history of breast cancer or breast lump, coronary artery disease, venous thrombosis, migraine headache, changed liver function test and features of pheochromocytoma, thyrotoxicosis, carcinoid syndrome. were not included in this study.

Age, occupation, socioeconomic position, signs of TAH with BSO, the intraoperative and postoperative periods, and any further related problems were all noted in a thorough history of the cases. Their current complaints, such as hot flashes, night sweats, insomnia, incidents of fainting, palpitations, etc., were noted in detail, including the frequency, severity, and timing of each episode.

128 women were randomly split into equal groups of 64 each, based on the eligibility criteria. For 12 weeks straight, two groups received treatment: one group received isoflavone 70%-100mg daily (isoflav CR) and the other received conjugated oestrogen 0.625 mg daily (premarin). All the women provided their informed permission after receiving thorough counselling for both groups.

Every woman was given a daily chart to keep track of their vasomotor symptoms, such as hot flashes, night sweats, insomnia, and the length of their fainting episodes, and they were given the necessary instructions on how to keep this record.

Until the end of the treatments, all ladies were observed every four weeks. The monitoring chart and the women's statements regarding the relief of vasomotor symptoms were used

as the basis for evaluation and analysis following the end of 12 weeks of continuous therapy.

Result

128 women who had undergone surgical menopause were enrolled for this study period overall based on the inclusion criteria. 18 of them were impossible to follow.

110 patients had completed a 12-week treatment cycle, including 58 women in the conjugated oestrogen group and 52 in the phytoestrogen group.

Table 1: Demographic profile (n=110)

Age in years	No. of women
35−40	12
41−45	22
46−50	52
51−55	18
56-60	6

The majority of the women in the 12-week therapy cycle are perimenopausal, and 52 of them (47.27%) are between the ages of 46 and 50.

Table 2: Indications of TAH with BSO (surgical menopause)

Indications	No. of women	Percentage
Multiple uterine fibroids in perimenopausal age group	44	40.00%
DUB in perimenopausal age group	38	34.54%
Ca ovary	16	14.54%
Multiple uterine fibroids with B/L ovarian cyst	4	3.63%
DUB with bilateral ovarian cyst	4	3.63%
Uterine fibroids with family H/O ovarian malignancy	4	3.63%

DUB (n=38, 34.54%) and multiple uterine fibroid (n=44, 40%) in the perimenopausal age range were identified to be the main indication out of 110 women who underwent treatment.

Table 3: Comparative evaluation of no. of women suffering fromvasomotor symptoms in both groups prior to treatment.

Vasomotor symptoms	Conjugated oestrogen group (n=58)	Phytooestrogen group (n=52)
	No. of cases (%)	No. of cases (%)
Hot flashes	58 (100%)	52 (100%)
Night sweats	16 (79.3%)	28 (53.84%
lnsomnia	20 (34.48%)	22 (42.3%
Palpitation	14 (24.13%)	18 (34.61%
Headache	14 (24.13%)	14 (26.92%
Fainting attack	6 (5.45%)	Nil (0%)

Since hot flashes were considered a key criterion for the study group, 110 women, or 100% of the sample, reported experiencing them. Prior to treatment, Table 3 compares the examination of women in both groups who had vasomotor symptoms.

Table 4: Comparative evaluation of no. of women getting relieffrom vasomotor symptoms after completing 12 weeks of treatment.

Vasomotor symptoms	Conjugated oestrogen group	Phytooestrogen group
	No. of cases (%)	No. of cases (%)
Hot flashes	48 (82.75%)	14 (26.92%)
Night sweats	30 (65.21%)	2 (7.14%)
lnsomnia	2 (10%)	Nil (0%)
Palpitation	Nil (0%)	Nil (0%)
Headache	Nil (0%)	Nil (0%)
Fainting attack	Nil (0%)	Nil (0%)

After receiving treatment for 12 weeks, women in both groups were evaluated to see if their vasomotor symptoms had improved (see Table 4). When compared to 14 (26.92%) of the women in the phytooestrogen group alone, hot flashes were dramatically reduced in 48 (82.75%) of the women who took conjugated oestrogen.

The severity alone, not the number of incidents, is how it is determined.

Only the 30 (30.21%) women taking conjugated oestrogen report fewer night sweats. There were no discernible impacts on things like insomnia, palpitations, headaches, attacks of fainting, etc. in either group.

Table 5: Comparative evaluation of side effects

	Conjugated oestrogen group	Phytooestrogen group
	No. of cases (%)	No. of cases (%)
Nausea	10 (17.24%)	2 (3.84%)
Breast tenderness	4 (6.89%)	Nil (0%)
Leg cramps	4 (6.89%)	Nil (0%)
Limb pain	Nil (0%)	Nil (0%)
Fluid retention	Nil (0%)	Nil (0%)
Vaginal discharge	Nil (0%)	Nil (0%)
Eye irritation	Nil (0%)	Nil (0%)

Comparative evaluation of the side effects in both groups is shown in Table 5. Both groups were deemed to be relatively safe and well-tolerated by all the women who participated in this trial, with the exception of a few minor side symptoms including nausea, breast tenderness, leg cramps, etc. in the conjugated oestrogen group.

Discussion

This study summarises our observations in one year period. To improve their quality of life, surgically menopausal women with vasomotor symptoms need particular care. According to several studies, HRT with conjugated oestrogen can be used to treat surgically menopausal women in a safe and effective manner to address vasomotor symptoms[5-7]. According to Hickey *et al*, taking conjugated oestrogen can reduce hot flashes by up to 87%[8-12] and night sweats by up to 65%, which is equivalent to our study. On the other hand, in the study phytooestrogen group, hot flashes were only reduced by 26.92%. This work and others like Albertazzi P *et al*.[13] and Washburn S *et al*.[14] can be contrasted.

According to Utian W H, Lederman *et al*.[15], conjugated oestrogen can reduce

vasomotor symptoms in surgical menopause by up to 80%, which is comparable to our study's 82.75% effectiveness rate in controlling hot flashes.

Gregory Burke and colleagues[16], North Carolina, assert that phytooestrogen lessens the intensity of hot flashes but not the frequency of attacks, which is consistent with our results.

The findings of Nagata C, Shimizu H, *et al*.[17] from 1999, which do not apply to our investigation, suggest that phytooestrogen reduces vasomotor symptoms, particularly hot flashes, in surgical menopause.

Conclusion

Vasomotor symptoms in surgical menopause can be managed with hormone replacement therapy, particularly conjugated oestrogen, with adequate selection and surveillance. Compared to phytooestrogen, conjugated oestrogen considerably lessens the severity and occurrence of vasomotor symptoms in surgical menopause.

Throughout this 12-week investigation, phytoestrogen and conjugated oestrogen were both determined to be well-tolerated and secure.

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