

Comparative Assessment of Effect of Phytoestrogen and Conjugated Oestrogen on Vasomotor Symptoms in Surgical Menopause

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ABSTRACT

Background: The reproductive life span of women is 36 years. Menopause is defined as permanent stoppage of menses. During the phase women goes through various mental, psychological and physical changes. Various plant derived substances which are structurally similar to oestrogen and bind to oestrogen receptors, also known as phytoestrogens are used for relief of vasomotor symptoms. The present study was conducted to compare the effect of phytoestrogen and conjugated oestrogen on vasomotor symptoms.

Materials and Methods: The present study was conducted in the Department of Obstetrics and Gynaecology, OPD of Govt. Medical College and Rajindra Hospital Patiala during a period of one year. It was conducted from June 2016 to June 2017. A detailed medical and gynaecological history was obtained from all the patients. Vasomotor symptoms like hot flushes and night sweats were noted. All the symptoms were noted on a four point scale with 0 means none and 3 indicating severe symptoms. Patients were divided into group-I and group-II. Patients were followed up for a period of 3 months and the symptoms were recorded again after giving phytoestrogen to group-I and conjugated oestrogen to group-II. Chi square test was used to compare the results. Probability value less than 0.05 was considered significant.

Results: In group I the mean age of women was 51.6±5.2 years and in group II, the mean age of women was 49.8±4.7 years. The mean height in Group I and group II was 153.9±6.3

cm and 151.4±4.7 cm respectively. The baseline score recorded in group I was 0.48±0.81 and in group II was 0.51±0.76. There was a mean change of 0.03±0.08 and 0.04±0.08 in group I and group II respectively. There was no significant change in vasomotor symptoms amongst both the groups ($p>0.05$).

Conclusion: From the present study we concluded that phytoestrogens are a safe and effective alternative to conjugated estrogens but still there is lack of information about the exact dosage and the long term side effects associated with its use.

Keywords: Menopause, Oestrogens, Phytoestrogens, Reproductive.

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INTRODUCTION

The reproductive age of women is controlled by various factors like paracrine, endocrine and autocrine which regulate the ovarian cycle and endometrium remodelling. The reproductive life span of women is 36 years. Menopause is defined as permanent stoppage of menses. During the phase women goes through various mental, psychological and physical changes.¹ Menopause is associated with large number of symptoms like irritation, hot flushes etc. These symptoms are due to decrease in the level of oestrogen and their frequency and variation in severity reflects changes in the level of oestrogen.² Therapy with oestrogen is a highly effective treatment for the management of menopause symptoms.³ Various forms of estrogens are available like tablets, topical form, vaginal rings which provide effective relief in 90% of women.⁴ It is seen that oestrogen administration provides dose

related benefits, which are even provided in low doses.⁵⁻⁷ Various plant derived substances which are structurally similar to oestrogen and bind to oestrogen receptors, also known as phytoestrogens are used for relief of vasomotor symptoms.⁸ The potency and effectiveness of these preparations is not well established but these are considered safe and effective.⁹ Since most of the Indian women do not come for regular follow up visits, so hormonal replacement therapy can be dangerous. Various advantages of hormone replacement therapy include less incidence of vertebral and hip fracture¹⁰, decrease chances of cardiovascular diseases^{11,12} and a delay in development of Alzheimer disease¹³. The present study was conducted to compare the effect of phytoestrogen and conjugated oestrogen on vasomotor symptoms.

MATERIALS AND METHODS

The present study was conducted in the Department of Obstetrics and Gynaecology, OPD of Govt. Medical College and Rajindra hospital Patiala during a period of one year. It was conducted from June 2016 to June 2017. All subjects enrolled in this study were informed about the study and a written consent was obtained in their vernacular language. In this study, 80 patients with surgical menopause who were symptomatic and reported to the outpatient department were included in the study. Any incontinent women, asymptomatic women, women already on hormone replacement therapy were not included in the study. Patients with active urinary tract infections were not included in the study. A detailed medical

and gynaecological history was obtained from all the patients. Vasomotor symptoms like hot flushes and night sweats were noted. All the symptoms were noted on a four point scale with 0 means none and 3 indicating severe symptoms. Group-I were given isoflav 60 mg per day. Group-II were given 0.625 mg of conjugated oestrogen per day. Patients were followed up for a period of 3 months and the symptoms were recorded again.

The results were recorded in a tabulated form and all the data was analyzed by SPSS software. Chi square test was used to compare the results. Probability value less than 0.05 was considered significant.

Table 1: Demographic details of patients

DEMOGRAPHIC DETAIL	GROUP I (phytoestrogen)	GROUP II (conjugated estrogen)
Mean age (years)	51.6+/- 5.2	49.8+/- 4.7
Mean height (cm)	153.9+/- 6.3	151.4+/- 4.7
Mean weight (kg)	54.3+/- 4.3	55.6+/- 5.1

Table 2: Comparison of phytoestrogens and conjugated estrogen on vasomotor symptoms.

	GROUP I	GROUP II	P VALUE
BASLINE	0.48+/-0.81	0.51+/-0.76	>0.05
FOLLOW UP	0.45+/- 0.79	0.47+/- 0.68	>0.05
MEAN CHANGE	-0.03+/-0.08	-0.04+/-0.08	>0.05

RESULTS

The present study enrolled 80 women having vasomotor symptoms after surgical menopause. They were divided into two groups. In group I, Phytoestrogen were given and in group-II conjugated oestrogen were given.

Table I shows the details of the patients. In group I the mean age of women was 51.6±5.2 years and in group II, the mean age of women were 49.8±4.7 years. The mean height in Group I and group II was 153.9±6.3 cm and 151.4±4.7 cm respectively. The mean weight in group I was 54.3±4.3Kg and in group II was 55.6±5.1 Kg. There was no significant difference in the demographic details between the two groups ($p>0.05$).

Table 2 shows the change in the vasomotor symptoms amongst both groups after a follow up of 3 months. The baseline score recorded in group I was 0.48±0.81 and in group II was 0.51±0.76. After a follow up period of 3 months, score reduced to 0.41±0.79 in group I and 0.47±0.68 in group II. There was a mean change of 0.03±0.08 and 0.04±0.08 in group I and group II respectively. There was no significant change in vasomotor symptoms amongst both the groups ($p>0.05$).

DISCUSSION

During menopause there is an alteration of the hormonal status which leads to decrease in the quality of life due to uncomfortable symptoms. Menopause occurs approximately at an age of 51.4 years in women.¹⁴ Various factors also affect the transition to menopause like smoking women, it is accelerated by 2 years¹⁵, body mass index, family history¹⁶; all affect onset of menopause. Menopause onset is characterized by various symptoms like weight gain, hot flushes and fatigue.¹⁴ The intensity of hot flushes varies and the path physiology behind it is unknown. Beside these

various other menopausal symptoms experienced by women are vaginal dryness, dyspareunia and itching.¹⁵ There is increased risk of osteoporosis^{17,18} and cardiovascular disease during menopause.¹⁹ Most of symptoms of menopause are due to decrease in the level of oestrogen and increase in the level of gonadotropin releasing hormone.²⁰

Replacement with hormones inhibits these symptoms. Moreover there have been various controversies regarding this hormone replacement therapy. According to a survey by women's health initiative, this has lead to increased risk of stroke²¹ and thromboembolism.²² In an attempt to find a natural alternative to this, phytoestrogens were developed. In a study conducted by Penotti et al²³, Qvella et al²⁴ and Upmalis DH et al²⁵ who compared soya extract with placebo, found that there was no significant difference in the vasomotor effects amongst soya and placebo groups. In a study conducted by Subhi Vithal et al²⁶ to determine whether phytoestrogens are an alternative to hormone replacement therapy, they found that 75 out of 90 cases show significant improvement in the vasomotor and other postmenopausal symptoms. According to our present study there was no difference in the improvement of vasomotor symptoms when conjugated estrogens and phytoestrogens were compared. The main drawbacks of our study were shorter follow up period and less sample size. Both surgical and non-surgical menopause should be taken into consideration.

CONCLUSION

From the present we can conclude that phytoestrogens are a safe and effective alternative to conjugated estrogens but still there is lack of information about the exact dosage and the long term side effects associated with its use.

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