

## A Comparison of Effects of Vaginal Royal Jelly and Vaginal Estrogen on Quality of Life in Menopausal Women

Shweta Verma<sup>1\*</sup>

<sup>1</sup>Consultant Apollo Spectra,  
Gurgaon, Haryana, India. Email:  
atuldeepa16@gmail.com  
\*Corresponding author

### Abstract

**Background:** Menopause is a stage in a woman's life that marks the end of the reproductive age. The present study was conducted to compare effects of vaginal royal jelly and vaginal estrogen on quality of life. **Methods:** 60 menopausal women were divided into 3 groups. Group I were prescribed lubricant, group II Premarin (estrogen 0.625 mg) and group III were given royal jelly 15%. Quality of life was recorded. **Results:** The mean age was 54.2 years in group I, 53.6 years in group II and 52.8 years in group III. BMI (Kg/m<sup>2</sup>) was 29.0 in group I, 29.4 in group II and 28.4 in group III. Menopause age was 48.2 years, 49.1 years in group II and 49.5 years in group III. Number of delivery was 5.4 in group I, 5.8 in group II and 4.1 in group III. The difference was significant ( $P < 0.05$ ). The mean score for vasomotor problem was 8.1, 8.7 and 10.2 in group I, group II and group III respectively. Psychosocial problem score was 14.5 in group I, 17.2 in group II and 18.3 in group III. Physical problem score was 41.0, 41.5 and 50.2 in group I, group II and group III respectively, sexual problem score was 11.2, 12.9 and 12.5 in group I, group II and group III respectively and quality of life score was 77.2, 79.2 and 92.5 in group I, group II and group III respectively. The difference was non-significant ( $P > 0.05$ ). **Conclusion:** Vaginal royal jelly was effective in improving symptoms of sexual and urinary problems and quality of life in postmenopausal females.

Received: January 2021  
Accepted: February 2021

Keywords: Estrogen, Menopause, Vaginal.

### INTRODUCTION

Menopause is a stage in a woman's life that marks the end of the reproductive age. As a physiological process, it is associated with both physical and emotional discomfort and has negative effects on quality of life.<sup>[1]</sup> In the postmenopausal stage, several somatic, urogenital, and psychological changes occur, which are attributed to reduced estrogen levels. Generally, menopausal symptoms may range from mild to severe. It has been evidenced that 80–

85% of women experience some of these symptoms during the menopausal period.<sup>[2]</sup>

Several causes can disturb the quality of life in postmenopausal women. Stress, urinary incontinence is one of the factors that can influence the quality of life of women, since they evade social activities and limit their behavior. Vulvovaginal disorders adversely impact sexual activity, psychosocial health and partner relationships. More than 56% of postmenopausal women undergo

dyspareunia affected by vaginal dryness, and the dyspareunia is correlated with reduced libido and ultimately disturbed quality of life.<sup>[3]</sup> To relieve menopausal symptoms, hormone replacement therapy (HRT) has been suggested for women.<sup>[4]</sup> Despite the confirmed advantages of HRT, there have been some concerns about the safety of this therapeutic method after the publication of Million Women Study and Women's Health Initiative which encouraged the application of alternative approaches. In complementary and alternative medicine, a wide range of compounds have been applied to alleviate the menopausal symptoms, such as isoflavones, lignin, St John's wort, black cohosh, ginseng, evening primrose oil, and royal jelly.<sup>[5]</sup> The present study was conducted to compare effects of vaginal royal jelly and vaginal estrogen on quality of life.

### MATERIALS & METHODS

The present study comprised of 60 menopausal women. All were informed and their written consent was obtained.

Demographic data such as name, age, gender etc. was recorded. Patients were divided into 3 groups. Group I were prescribed lubricant, group II Premarin (estrogen 0.625 mg) and group III were given royal jelly 15%. All patients were subjected to the menopause-specific quality of life (MENQOL) questionnaire, consisting of a total of 29 items in a 7 point likert-scale format. Each category investigate the effect of each of these menopausal problems

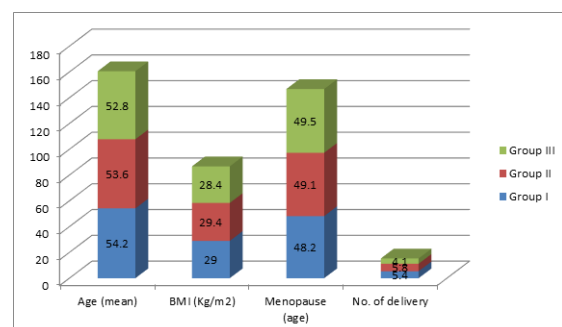
during the last month: vasomotor (items 1-3), psychosocial (items 4-10), physical (items 11-26), and sexual (items 27-29). Cytological examination of the cervix and vagina was also done pre- and postintervention period. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

### RESULTS

**Table 1: Demographic Characteristics**

Parameters	Group I	Group II	Group III	P-value
Age (mean)	54.2	53.6	52.8	0.14
BMI (Kg/m <sup>2</sup> )	29.0	29.4	28.4	0.11
Menopause (age)	48.2	49.1	49.5	0.12
No. of delivery	5.4	5.8	4.1	0.08

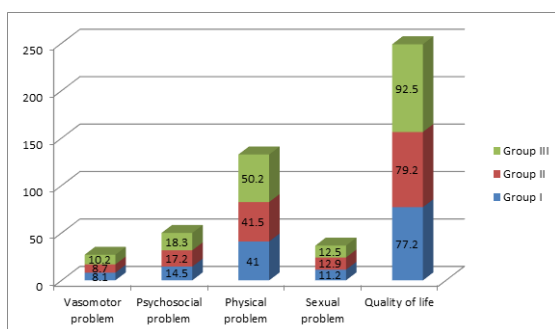
[Table 1, Figure 1] shows that mean age was 54.2 years in group I, 53.6 years in group II and 52.8 years in group III. BMI (Kg/m<sup>2</sup>) was 29.0 in group I, 29.4 in group II and 28.4 in group III. Menopause age was 48.2 years, 49.1 years in group II and 49.5 years in group III. Number of delivery was 5.4 in group I, 5.8 in group II and 4.1 in group III. The difference was significant (P< 0.05).



**Figure 1: Demographic Characteristics**

**Table 2: Comparison of quality of life**

Parameters	Group I	Group II	Group III	P value
Vasomotor problem	8.1	8.7	10.2	0.06
Psychosocial problem	14.5	17.2	18.3	0.12
Physical problem	41.0	41.5	50.2	0.17
Sexual problem	11.2	12.9	12.5	0.18
Quality of life	77.2	79.2	92.5	0.07



**Figure 2: Comparison of quality of life**

[Table 2, Figure 2] shows that mean score for vasomotor problem was 8.1, 8.7 and 10.2 in group I, group II and group III respectively. Psychosocial problem score was 14.5, 17.2 and 18.3 in group I, group II and group III respectively, physical problem score was 41.0, 41.5 and 50.2 in group I, group II and group III respectively, sexual problem score was 11.2, 12.9 and 12.5 in group I, group II and group III respectively and quality of life score was 77.2, 79.2 and 92.5 in group I, group II and group III respectively. The difference was non-significant ( $P > 0.05$ ).

## DISCUSSION

Menopause is a physiological period in women's lives. Menopause with structural changes in ovarian tissue and disruption of their activity results in a decrease in the level of estrogen secretion in the body.<sup>[6]</sup> The main consequences in menopause are largely dependent on estrogen levels.<sup>[7]</sup> Low levels of estrogen have adverse effects on the genitourinary tract and sexual function. However, vaginal atrophy is one of the most important factors affecting sexual function and the genitourinary system.<sup>[8]</sup> Vaginal atrophy is one of the most common menopausal complications associated with thinning, drying, and inflamed vaginal walls and increased vaginal pH levels. It is estimated that 90% of women are affected by its symptoms such as dryness, itching, burning of urine and painful intercourse.<sup>[9]</sup> The present study was conducted to compare effects of vaginal royal jelly and vaginal estrogen on quality of life. In present study, mean age was 54.2 years in group I, 53.6 years in group II and 52.8 years in group III. BMI (Kg/m<sup>2</sup>) was 29.0 in group I, 29.4 in group II and 28.4 in group III. Menopause age was 48.2 years, 49.1 years in group II and 49.5 years in group III. Number of delivery was 5.4 in group I, 5.8 in group II and 4.1 in group III. Seyeddi et al,<sup>[10]</sup> examined the therapeutic properties of vaginal cream of royal jelly and estrogen on quality of life, sexual and urinary problems in postmenopausal women.

90 married postmenopausal women 50 to 65-year-old were randomly distributed to three groups and were treated with vaginal cream of royal jelly 15%, lubricant, and conjugated estrogens for three months. Before and after intervention, quality of life and vaginal cytology were evaluated. The results expressed that vaginal royal jelly is considerably more effective than conjugated estrogens and lubricant in the improvement of quality of life, sexual and urinary function in postmenopausal women.

We found that mean score for vasomotor problem was 8.1, 8.7 and 10.2 in group I, group II and group III respectively. Psychosocial problem score was 14.5, 17.2 and 18.3 in group I, group II and group III respectively, physical problem score was 41.0, 41.5 and 50.2 in group I, group II and group III respectively, sexual problem score was 11.2, 12.9 and 12.5 in group I, group II and group III respectively and quality of life score was 77.2, 79.2 and 92.5 in group I, group II and group III respectively. Al-Baghdadi et al,<sup>[11]</sup> showed that moisturizers recover vaginal dryness, itching, dyspareunia, but their impacts are lesser than estrogen therapy that is again consistent with our findings. They found that local estrogen either alone or with androgen is effective in recovery of urogenital atrophy symptoms and sexual activity in postmenopausal women without any side effects. Ko et al,<sup>[12]</sup> found that Stress urinary incontinence is frequently associated with adverse effects on quality of life of patients. Severity of incontinence, one's

response to problems and physical image of oneself are among the factors affecting the quality of life. They suggested that topical estrogen therapy decreases the symptoms and prevent urinary tract infections.

## CONCLUSION

Authors found that vaginal royal jelly was effective in improving symptoms of sexual and urinary problems and quality of life in postmenopausal females.

## REFERENCES

1. Nagai T, Inoue R, Suzuki N, Nagashima T. Antioxidant properties of enzymatic hydrolysates from royal jelly. *Journal of Medicinal Food*. 2006;9(3):363-67.
2. Cavusoglu K, Yapar K, Yalcin E. Royal jelly (honey bee) is a potential antioxidant against cadmium-induced genotoxicity and oxidative stress in albino mice. *J Med Food*. 2009;12(6):1286-92.
3. Koc AN, Silici S, Kasap F, Hormet-Oz HT, Mavus-Buldu H, Ercal BD. Antifungal activity of the honeybee products against *Candida* spp. and *Trichosporon* spp. *Jmed Food*. 2011;14(1-2):128-34.
4. Ramadan MF, Al-Ghamdi A. Bioactive compounds and health-promoting properties of royal jelly: A review. *Journal of Functional Foods*. 2012;4:39-52.
5. Jamnik P, Goranovi D, Raspor P. Antioxidative action of royal jelly in the yeast cell. *Experimental Gerontology*. 2007;42(7):594-600.
6. Sinha A, Ewies A. Non-hormonal topical treatment of vulvovaginal atrophy: an up-to-date overview. *Climacteric: J Int Menopause Soci*. 2013;16(3):305-12.
7. Cardozo L, Bachmann G, McClish D, Fonda D, Birgerson L. Meta-analysis of estrogen therapy in the management of urogenital atrophy in postmenopausal women: second report of the Hormones and Urogenital Therapy Committee. *Obstet Gynecol*. 1998;92(4 Pt 2):722-27.



8. Long CY, Liu CM, Hsu SC, Wu CH, Wang CL, Tsai EM. A randomized comparative study of the effects of oral and topical estrogen therapy on the vaginal vascularization and sexual function in hysterectomized postmenopausal women. *Menopause* (New York, NY). 2006;13(5):737-43.
9. Raymundo N, Yu-cheng B, Zi-yan H, Lai CH, Leung K, Subramaniam R, et al. Treatment of atrophic vaginitis with topical conjugated equine estrogens in postmenopausal Asian women. *Climacteric: J Int Menopause Soci*. 2004;7(3):312-18.
10. Seyyedi F, Rafiean-Kopaei M, Miraj S. Comparison of the effects of vaginal royal jelly and vaginal estrogen on quality of life, sexual and urinary function in postmenopausal women. *Journal of clinical and diagnostic research: JCDR*. 2016 May;10(5):QC01.
11. Al-Baghdadi O, Ewies A. Topical estrogen therapy in the management of postmenopausal vaginal atrophy: an up-to-date overview. *Climacteric: J Int Menopause Soci*. 2009;12(2):91-105.
12. Ko Y, Lin SJ, Salmon JW, Bron MS. The impact of urinary incontinence on quality of life of the elderly. *Am J Manag Care*. 2005;11(4 Suppl):S103-11.

Source of Support: Nil, Conflict of Interest:  
None declared