

RESEARCH ARTICLE

Effectiveness of *Ashwagandhadi* Transdermal Gel on Perimenopausal Symptoms - A Clinical Study

Author: Gayathri Bhat N V¹

Co Authors: Poornachandra Thejaswini²

^{1,2}Department of Prasuti Tantra evum Streeroga, S.D.M. college of Ayurveda and hospital, Hassan, Karnataka, India

ABSTRACT

Background: Perimenopause is associated with multiple symptoms such as hot flashes, night sweats, mood swings, and decreased libido, which adversely affect quality of life. Conventional hormone replacement therapy (HRT) offers relief but may cause adverse effects.

Objective: To evaluate the effectiveness of *Ashwagandhadi* transdermal gel in relieving perimenopausal symptoms and compare with estrogen gel.

Materials and Methods: Five perimenopausal women aged 40–55 years fulfilling Kuppermann's diagnostic criteria were enrolled for an 8-week study. The trial group received *Ashwagandhadi* transdermal gel applied once daily on both arms. Assessment was done using Kuppermann's scale.

Results: Significant reduction in symptoms was observed, especially hot flashes, night sweats, melancholia, and insomnia. Improvement in quality of sleep and mood was noted in 4 of 5 cases. All cases reported resolution of vasomotor symptoms.

Conclusion: *Ashwagandhadi* transdermal gel is effective in reducing perimenopausal symptoms and improving quality of life without adverse effects.

Key Words *Ashwagandhadi gel, Perimenopause, Phytoestrogens, Menopausal symptoms, Kuppermann's scale*

Received 30th June 2025 Accepted 27th August 2025 Published 10th September 2025

INTRODUCTION

Menopause is defined as the time of cessation of ovarian function resulting in permanent amenorrhea. It takes twelve months of amenorrhea to confirm that menopause has set in, and therefore it is an event rather than a period of time. Thus the word perimenopause refers to the time before, during and after permanent cessation of menstruation. The perimenopausal symptoms involve hot flashes, night sweats, vaginal itching,

dryness of vagina, mood swings, decreased libido which adversely impacts the quality of life of women of that age group. Annually over all 50 million cases claim to be suffering from perimenopausal syndrome around the world. As nearly one-third of a woman's life is spent after menopause, if these symptoms are not addressed the condition may worsen over a period of time affecting the quality of their life. In the present clinical practice low dose estrogen represent

RESEARCH ARTICLE

highly effective treatment in this condition or in combination with progesterone in the form of tablets, vaginal creams, gels, transdermal patches. This hormone replacement therapy may cause side effects such as vaginal bleeding, breast tenderness, mood changes, weight gain, water retention and endometrial cancer.

Most of the *acharyas* have mentioned the age of *rajo nivrutti* as fifty years¹ as a result of *Jaravastha*. *Acharya Arunadatta* opines that the age mentioned above is a probable age and not a fixed one². During this phase of *Jaravastha* which is a *swabhavika vyadhi*, there will be *Agnimandya* leading to improper formation of *Rasa Dhatu*. As *Artava* is the *Upadhatu* of *Rasa Dhatu*, there will be gradual diminution of *Dhaturoopi Artava*, resulting in *Rajoiivrutti*. This metabolically transformative phase shows *vataja lakshanas* like *bala kshaya*, *anidra/alpanidra*, *shabda asahishnuta*, *kati shoala*, *sandhi vedana*, *pittaja lakshanas* like *daha*, *glani*, *yonidaha*, *ratri-sweda*, *mutradaha*, *swedadikya*, *bhrama* and *manasika lakshanas* like *krodha*, *shoka*, *chinta*, *smritinasha*, *bhaya*, *vishada* etc. These *lakshanas* may be understood as perimenopausal symptoms^{3,4}. During this period, the administration of *dravyas* having *rasayana*, *brumhana*, *santarpana* and *pittahara properties* like *ashwagandha*, *shatavari*, *Mandooka parni* in *ksheerapaka* form is found to be beneficial.

Hormone replacement therapy is indicated in perimenopausal woman to overcome the short term and long term consequences of oestrogen deficiency. Oestrogen when given orally

undergoes 'first pass' metabolic effect in the gut and liver. Hence transdermal hormonal gels are desirable with high drug penetrating power. But most of the women found oral administration is difficult and inconvenient in fast going life, and transdermal gel application is yielding much results. But the estrogen gel is having much adverse effects when compared with *Ashwagandhadi* transdermal gel, which is having no adverse effects. Hence the study is being undertaken.

REVIEW OF THE LITERATURE-

● DISEASE REVIEW-

Menopause refers to the natural biological process of permanent cessation of menstruation. But the symptoms such as hot flashes, night sweats, mood swings, vaginal drying, and vaginal itching may disrupt woman's life. The physical changes like shrinkage of ovary, sclerosis of blood vessels, and atrophy of fallopian tubes, uterus, cervix and vagina will occur. Disturbed folliculogenesis during this period may result in anovulation, oligo ovulation, and premature corpus luteal insufficiency. There is a significant fall in the level of serum oestradiol from 50-300pg/ml before menopause to 10-20pg/ml after menopause. This decreases negative feedback effect of HPO axis resulting in increase in FSH. The increase in FSH is also due to diminished inhibin. Increase of LH occurs subsequently⁵.

This impaired endocrine system will result in hot flashes, night sweats, menstrual irregularities, vaginal dryness, depression, nervous tension, September 10th 2025 Volume 23, Issue 2 Page 2

RESEARCH ARTICLE

palpitations, headache, insomnia, lack of energy, difficulty concentrating and dizziness⁵.

● DRUG REVIEW-

● The presence of flavonoids in these drugs, will help to improve oestrogen level. The withenin present in *Ashwagandha*, casticin-castilliferol present in *Mandooka parni*, luteolin in *shatavari* are proven to have highest phytoestrogen in them⁶.

● *Ashwagandha* intake demonstrated a statistically significant reduction in total MENQoL scores ($p < 0.0001$) and was also associated with a statistically significant increase in serum estradiol ($p < 0.0001$)⁷.

● *Shatavari* contains phytoestrogenic compounds that bind to the estradiol receptor⁸.

● *Shatavari* administration in rats induces pro-estrogenic changes in mammary glands and genital organs⁹.

● LD50 studies of the *Ashwagandha*, *shatavari* and *Mandooka parni* have shown no toxic effects^{10,11,12}. The hepatoprotective, nephroprotective and neuroprotective properties of the foresaid have been proven^{13,14,15,16,17}.

OBJECTIVES

1. To study the effectiveness of *Ashwagandhadi* transdermal gel in relieving perimenopausal symptoms

2. To compare the trial group with control group applied with estrogen gel in relieving perimenopausal symptoms

MATERIALS AND METHODS

Diagnostic criteria-

Major criteria-

- Hot flashes or night sweats,
- Fatigue, headache, irritability.

Minor criteria-

- With or without depression, vertigo, nervousness, Paresthesia, sexual complaints, urinary tract infections, palpitations, formication, arthralgia, myalgia, insomnia.

Inclusion criteria-

- Age group – 40 to 55 years^{18,5}.
- Fulfilling diagnostic criteria.

Exclusion criteria-

- Any pre-existing psychological disorder.
- K/C/O uncontrolled diabetes mellitus, hypertension, thyroid dysfunction.

A total of five patients fulfilling the inclusion criteria were selected into the study duration of 8 weeks.

Assessment criteria –

patients were assessed based on Kuppermann’s scale.

Table 1 Kuppermann’s scale

Symptoms	Weighting factor	Severity scale				Score	
		0	1	2	3	Raw score	Weighted score
Sweating, Hot flashes	x4	None	<3times/day	3-9 times/day	>= 10times /day	Severity scoring of individual	Raw score x weighting factor =
Headache	X1	None	Once in a	Frequent	Requires		

RESEARCH ARTICLE

			while			treatment	symptoms	weighted score
Insomnia	x2	None	Once while	in	a	Frequent need sleeping pill	Affects life and work	
Nervousness	x2	None	Once while	in	a	Frequent	Frequent, cannot control	
Melancholia	x1	None	Once while	in	a	Frequent, can self-control	Losing faith in life	
Fatigue	x1	None	Once while	in	a	Feel difficult when climbing the 4 th floor	Affects daily life	
Vertigo	x1	None	Once while	in	a	Frequent	Affects daily life	
Arthralgia, myalgia	x1	None	Once while	in	a	Frequent, not affecting the function	Affects daily life	
Paresthesia	X2	None	Relationship with climate			Feel tingling, burning, pricking or numbness frequently	Lose sense of warm and pain	
Palpitations	x1	None	Once while	in	a	Frequent, not affecting daily life	Requires treatment	
Formication	x1	None	Once while	in	a	Frequent	Requires treatment	
Sexual complaints	x2	Normal	Reduced libido			Sexual problems	Loss of libido	
Urinary tract infection	x2	None	Once while	in	a	More than 3 times per year, not requiring medication	More than 3 times per year, requiring medication.	

Total score = sum of weighted score

[“no complaint - total score 0–6”, “mild - total score 7–15”, “moderate - total score 16–30”, “severe - total score > 30”]

Method of application-

Table 2 Method of application

	Trial group
Formulation	<i>Ashwagandhadi</i> transdermal gel.
Area of application	shoulder.
Treatment modalities	Application <i>over</i> the dry and cleaned both arms in the manner of outer arm from shoulder down.
Time	8 weeks.
Duration of application	Once in a day.

RESULTS

Table 3 Results

	Age	Kuppermann’s scale scoring	
		Before treatment	After treatment
Case 1	48	28	17
Case 2	47	26	15
Case 3	47	20	10
Case 4	42	25	12
Case 5	46	26	12

DISCUSSION

- Perimenopause is physiologically transformative phase. During this phase there be

RESEARCH ARTICLE

gradually decreased liver metabolism, in turn result in *Agnimandya*. Due to *Agnimandya*, there won't be proper formation of *Rasa Dhatu*, resulting in improper formation of *Artava*.

- Due to this metabolic change, *Artava utpatti* gradually diminishes and the *Agneyata* of *Artava* attains *urdagamana*, resulting in hot flashes. Eventually diminution of *malaropi Artava* results in *Rajonivrutti*.

- During this phase, to improve the quality of the usage of drugs having *rasayana*, *brumhana*, *santarpana* properties are beneficial.

- *Ashwagandhidi* transdermal gel has been proven to significant results in reducing perimenopausal symptoms. Especially it is effective in reducing symptoms like hot flushes, night sweats, melancholia, insomnia.

- 4 of 5 cases reported to have improved quality of sleep and reduced mood swings.

- All 5 cases claimed to get rid of hot flashes and night sweats.

- The phytoestrogens present in *Ashwagandha*, *Shatavari* and *Mandukaparni* are effective to relieve perimenopausal symptoms.

Ashwagandhadi transdermal gel is an effective formulation in relieving perimenopausal symptoms. It helps to improve quality of life among the women of menopausal age group.

CONCLUSION

Menopause is the transitional phase between adulthood and senility. During this phase due to gradual cessation of female reproductive hormones, women will face various difficulties in day today life such as mood swings, night sweats, paraesthesia,

RESEARCH ARTICLE

REFERENCES

1. Acharya YT, ed. *Susrutasamhita with Nibanda Sangraha commentary of Sri Dalhanacharya and Nyayachandrikapanjika of Sri Gayadasacharya on Nidanasthana*. Varanasi: Chaukhamba Surabharati Prakashan; 2019. p. 351.
2. Bhisagacharya HP, ed. *Astanga Hridayam of Vagbhata with the commentaries of Sarvanga Sundari of Arunadatta and Ayurvedarasayana of Hemadri*. 9th ed. Varanasi: Chaukhamba Orientalia; 2018. p. 363.
3. Baldaniya VH. Rajonivrutti (menopause) - Ayurvedic point of view. *JAIMS*. 2017;2(1):7503. doi:10.21760/jaims.v2i1.7503.
4. Priyanka S. Rajonivrutti: an overview. Central Council for Research in Ayurvedic Sciences.
5. Dutta DC. *Textbook of Gynecology*. 6th ed. Konar H, editor. New Delhi: Jaypee Brothers Medical Publishers; 2013. p. 57.
6. wers CN, Setzer WN. A molecular docking study of phytochemical estrogen mimics from dietary herbal supplements. In *Silico Pharmacol*. 2015;3:4. doi:10.1186/s40203-015-0006-1.
7. Gopal S, Ajaokar A, Kanchi P, Kaundinya A, Thakare V, Chauhan S, et al. Effect of an ashwagandha (*Withania somnifera*) root extract on climacteric symptoms in perimenopausal women: a randomized, double-blind, placebo-controlled study. 2021.
8. O'Leary FM, Jackman RS, Sabou RV, Campbell IM, Tang YCJ, Dutton J, et al. Shatavari supplementation in postmenopausal women improves handgrip strength and increases vastus lateralis myosin regulatory light chain phosphorylation. *Nutrients*. 2021;13(12):4282. doi:10.3390/nu13124282.
9. Pandey SK, Sahay A, Pandey RS, Tripathi YB. Effect of *Asparagus racemosus* rhizome (Shatavari) on mammary gland and genital organs of pregnant rat. *Phytother Res*. 2005;19:721-724. doi:10.1002/ptr.1590.
10. Bhandary SK, Sharmila KA, Suchetha NK, Bhat SV, Fernandes R. Acute and subacute toxicity profile of *Asparagus racemosus* root extract, Isoprinosine & Shatavari syrup in Swiss albino mice. *J Appl Pharm Sci*. 2017;7(5):123-128. doi:10.7324/JAPS.2017.70523.
11. Chauhan PK, Singh V. Acute and subacute toxicity study of acetone leaf extract of *Centella asiatica* in experimental animal models. *Asian Pac J Trop Biomed*. 2012;2(3):S1606-S1610. doi:10.1016/S2221-1691(12)60263-9.
12. Sharada AC, Solomon FE, Devi PU. Toxicity of *Withania somnifera* root extract in rats and mice. *Int J Pharmacogn*. 1993;31(3):205-212. doi:10.3109/13880209309082943.
13. Philips AC, Ahmed R, Sasidharan R, Mohanan M, George T, Augustine P. Comprehensive review of hepatotoxicity associated with traditional Indian Ayurvedic herbs. *World J Hepatol*. 2020;12(9):574-595. doi:10.4254/wjh.v12.i9.574.
14. Jaiswal N. A review on medicinal properties of *Centella asiatica*. *Asian J Pharm*

RESEARCH ARTICLE

Clin Res. 2017;10(10):207-210.

doi:10.22159/ajpcr.2017.v10i10.20760.

15. Okkay IF, Okkay U, Aydin IC, Bayram C, Ertugrel SM, Mendil SA, et al. Centella asiatica extract protects against cisplatin-induced hepatotoxicity via targeting oxidative stress, inflammation, and apoptosis. *Environ Sci Pollut Res Int.* 2022;29(22):33455-33465.

doi:10.1007/s11356-022-18626-z.

16. Aggarwal A, Sharma M, Rai KS, Singh B, Tiwari M, Chandra R. Effect of aqueous extracts of the roots of *Asparagus racemosus* on hepatocarcinogenesis initiated by diethylnitrosamine. *Phytother Res.* 2008;22(9):1184-1188. doi:10.1002/ptr.2391.

17. Majumdar S, Gupta S, Prajapati KS, Krishnamurthy S. Neuro-nutraceutical potential of *Asparagus racemosus*: a review. *Neurochem Int.* 2021;145:105013.

doi:10.1016/j.neuint.2021.105013.

18. Ahuja M. Age of menopause and determinants: a PAN India survey by IMS. *J Midlife Health.* 2016;7(4):191-195.

doi:10.4103/0976-7800.191012.