

AN OPEN LABEL RANDOMIZED COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF *SHATAVARI GUDA* AND *KUSHMANDAKA RASAYANA* IN HEAVY MENSTRUAL BLEEDING

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ABSTRACT

Background: Heavy menstrual bleeding is the medical term for menstruation with abnormally heavy or prolonged bleeding. In present days, due to changing lifestyle with food habits, incidence of excessive and irregular menstrual bleeding is increasing day by day because of which women need to take off from the work. Heavy menstrual bleeding affect not just physical but also social, emotional and psychological well being & quality of life. As per Ayurvedic references *SHATAVARI GUDA* and *KUSHMANDAKA RASAYANA* is considered as most useful remedy for Menstrual disorders. The present study focused on the effect of *SHATAVARI GUDA* and *KUSHMANDAKA RASAYANA* on Heavy Menstrual Bleeding. **Objective:** To compare the efficacy of *Shatavari Guda* and *Kushmandaka Rasayana* in Heavy menstrual bleeding. **Materials and Methods:** A detailed case proforma was prepared, considering the lakshana explained in our classics to diagnosed *Asrigdara*. 40 subjects fulfilling the inclusion criteria were selected from OPD, IPD of JSS Ayurveda Medical College and Hospital, Mysuru, and other referrals, including medical camps.

Result: Group A and Group B both are effectively improved the symptoms of Heavy Menstrual Bleeding by reducing menstrual blood loss, duration of bleeding, pain, and clot passage. Comparatively, *Kushmandaka Rasayana* produced earlier and more pronounced improvement, with better maintenance of benefits during follow-up. **Conclusion:** Both *Shatavari Guda* and *Kushmandaka Rasayana* were effective in the management of Heavy Menstrual Bleeding. However, *Kushmandaka Rasayana* demonstrated comparatively better overall efficacy.

Keywords: *Asrigdara*, Heavy Menstrual Bleeding, *Kushmandaka Rasayana*, *Shatavari Guda*

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INTRODUCTION:

Ayurveda has given principle significance to women health it has mentioned menstrual cycle as "*Rutuchakra*" and menses is phrased as "*Rajastrava*". Our *Acharya's* has imposed impressive explanation of "*Shuddha Raja*" i.e. Normal menstrual flow.

Regular menstruation is a result of coordinated HPO Axis.^[1] Menstruation occurs periodically for one month and consists of assorted intermittent phases. *Artava* or menstrual blood is expelled from the uterus through vagina in biological rhythm of women during her reproductive period i.e. from menarche to menopause. Length of *Rutuchakra* (menstrual cycle) is usually 28-30 days. A deviation of two to three days from the monthly rhythm is also quite common. The duration of bleeding is about five days and estimated blood loss is 20 to 80 ml.^[2] The length of the cycle depends upon the hypothalamic pituitary ovarian function where-as the amount of blood loss depends upon the uterine condition. Any disturbance in these elements may manifest as menstrual disorders.

In daily practice, abnormalities in menstrual function are common conditions seen by Gynecologist and Primary health providers. Due to changing lifestyle with food habits, incidence of excessive and irregular menstrual bleeding is increasing day by day because of which women need to take off from the work. Heavy menstrual bleeding affect not just physical but also social, emotional and psychological well being & quality of life. Various studies suggest that 30 to 50% of women in the reproductive age group suffer from excessive and irregular

uterine bleeding by various causative factors. 28% of the female population consider their menstruation excessive and will plan their social activities around their menstrual cycle, and nearly 10% of employed women will need to take off from work because of excessive menstrual loss. 6% of women aged 25 to 44 consult their GPS about excessive mensrual loss every year. Of the 35% of these referred to hospital, 60% will have a hysterectomy in the next 5 years. Over 75000 hysterectomies are now carried out every year with 30% of them carried out for menstrual disturbances alone.^[3]

Heavy menstrual bleeding is the medical term for menstruation with abnormally heavy or prolonged bleeding. International Federation of Gynaecology and Obstetrics (FIGO) Menstrual Disorders Working Group has proposed abandoning the use of one common term, dysfunctional uterine bleeding (DUB), while continuing to use the terms abnormal uterine bleeding (AUB) and heavy menstrual bleeding (HMB)

Any abnormality in *Rutuchakra* (Menstrual rhythm) leads excessive and irregular uterine bleeding which is known "*Asrigdara*." It is also called as "*Raktapradara*". According to *Aacharya Charaka*, excess discharge of blood per vaginum during the *Rutukala* is the symptom of the *Asrigdara*. It may be life threatening if not treated properly and immediately.

The diseases *Asrigdara* explained in Ayurveda may be correlated with condition of heavy menstrual bleeding.^[4] According to *Acharya Sushruta*, excessive and prolonged bleeding during menstruation or even in intermenstrual period,

different from the features of normal menstrual blood is called *Asrigdara*.^[5]

Various conditions which resemble Menorrhagia are termed as follows in *Ayurveda* texts-

Raktapradara/Asrigdara
Raktayoni Yonivyapad
Lohitkshara Yonivyapad, etc.

Various treatment modalities like hormonal therapy antiprostaglandins and antifibrinolytic agents are available in modern medicine. Many side effects have been observed, because of these medications, including hormonal

imbalance.^[1] There is always a need for safe and alternative treatment. Keeping this in mind, It was decided to select a herbal medicine for the management of Heavy Menstrual

Bleeding.^[1] As per Ayurvedic references *SHATAVARI GUDA* and *KUSHMANDAKA RASAYANA* is considered as most useful remedy for Menstrual disorders. Both formulations are mentioned under the context of *Rasayana*. It's a specialized branch of Ayurveda focused on rejuvenation, tissue nourishment, enhancement of immunity, and promotion of longevity. The term "*Rasayana*" is derived from "*Rasa*," denoting the primary nourishing fluid of the body, and "*Ayana*," meaning pathway. Thus, *Rasayana* therapy ensures proper nourishment and optimal functioning of all *Dhatus*. It enhances *Vyadhikshamatva* (disease resistance), maintains physiological balance, and supports systemic vitality. Both are administered orally and are renowned for their *Pittashamaka*, *Balya*, and *Rasayana* properties. *Kushmandaka* is characterized by *Madhura Rasa*, *Guru* and *Snigdha Guna*, *Sheeta Virya*, and *Madhura Vipaka*. It exhibits *Raktastambhaka*, *Pittashamaka*, *Balya*, and *Rasayana* properties. Whereas *Shatavari* possesses *Madhura* and *Tikta Rasa*, *Guru* and *Snigdha Guna*, *Sheeta Virya*, and *Madhura Vipaka*. It is well known for its *Pittashamaka*, *Vatahara*, *Garbhashaya Balya*, and *Rasayana* properties.

Thus, *Shatavari Guda* primarily acts as a uterine tonic with analgesic and rejuvenating properties, whereas *Kushmandaka Rasayana* acts predominantly as a hemostatic and cooling formulation. Based on these therapeutic attributes, both formulations were selected for the present study to evaluate their comparative efficacy in the management of Heavy Menstrual Bleeding.

AIMS & OBJECTIVES OF THE STUDY:

- To evaluate the efficacy of *Shatavari Guda* in heavy menstrual bleeding.
- To evaluate the efficacy of *Kushmandaka Rasayana* in Heavy menstrual bleeding.
- To compare the efficacy of *Shatavari Guda* and *Kushmandaka Rasayana* in Heavy menstrual bleeding.

MATERIALS & METHODS:

- **Selection of subjects:** In this study, 40 subjects fulfilling the criteria for diagnosis and inclusion visiting OPD and IPD of Dept of *Prasuti Tantra and Stree Roga*, JSS *Ayurveda* Hospital, camps and other referrals were considered for the study.
- **Drug source:**
 - *SHATAVARI GUDA* - was procured from GMP certified pharmacy.
 - *KUSHMANDAKA RASAYANA* - The raw drug was procured from convenient and

available source. The drug was authenticated by Department of PG studies in Dravyaguna, JSSAMCH, Mysuru & preparation was carried out at, GMP certified pharmacy (JSS Ayur Pharmacy), Mysuru.

- **Selection Criteria:** The subjects who fulfill the diagnostic criteria with the informed consent were selected and detailed case proforma was prepared according to Ayurveda guidelines. Data was collected by interview method.

- **Diagnostic Criteria:**

Subjects presenting with any one of the below

Lakshana:

1. *Ati Rajah Pravrutti* (excessive menstrual bleeding) H/O minimum 3 cycles.
2. *Deerghakala Rajah Pravrutti* (menstruation for prolonged period) bleeding more than 07days

- **Inclusion Criteria:**

1. Subjects fulfilling the diagnostic criteria.
2. Subjects with age group of 15 to 45 years.
3. Subjects with hemoglobin ≥ 10 gms.

- **Exclusion Criteria:**

1. Subjects with IUCD.
2. Subjects on oral Contraceptive pills.
3. Benign and malignant growth in reproductive organs.
4. Subjects with K/C/O metabolic and systemic disorders like Diabetes mellitus, Thyroid disorder, Hypertension.
5. Subjects with miscarriage/active bleeding followed by abortion.
6. K/C/O Coagulation Disorder, H/O previous thrombosis.
7. Lactating women.

- **Assessment Criteria:**

- **Subjective Parameters:**

I. Amount Of Bleeding

NO. OF PADS	GRADING
Maximum soakage of 1-2 pads in 24 hours	0
Maximum soakage of 3-4 pads in 24 hours	1
Maximum soakage of 5-6 pads in 24 hours	2
Maximum soakage of 6-7 pads in 24 hours	3
Maximum soakage of more than 7 pads in 24 hours	4

II. Duration Of Bleeding

Duration in days	Grading
2-3	0
3-5	1
6-7	2
8-10	3

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>10	4
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III. Pain

9-10	Severe pain
6-8	Moderate pain
3-5	Mild pain
1-2	Very mild pain
0	No pain

IV. Clots

Absent	0
Present	1

○ Objective Parameters:

I. Pictorial Bleeding Assessment Chart (PBAC)

Degree of Soakage of Pads	Score
Lightly stained pad	1
Moderately soiled pad	5
Completely soaked pad	20
Degree of Soakage of Tampons	Score
Lightly stained tampon	1
Moderately soiled tampon	5
Completely soaked tampon	10

Name: _____ Day start: _____ Patient No: _____
year month day

Pads	1	2	3	4	5	6	7	8
								
								
								
Clots/ Flooding								

Tampon	1	2	3	4	5	6	7	8
								
								
								
Clots/ Flooding								

• Treatment plan:

The selected subjects were divided into two groups. Group A was given with <i>Shatavari Guda</i> (6gms) BD with 100ml of lukewarm milk after food and Group B were given with	Group A	Group B
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<i>Kushmandaka Rasayana</i> (6gms) BD with 100ml of lukewarm milk after food.		
Number Of Subjects	20	20
Medicine	<i>Shatavari Guda</i>	<i>Kushmandaka Rasayana</i>
<i>Anupana</i>	100ml Milk (Lukewarm)	100ml Milk (Lukewarm)
Time Of Administration	After Food	After Food
Mode Of Administration	Oral Route	Oral Route
Dosage	6gms BD ^[7]	6gms BD ^[6]
Duration Of Medication	3 Consecutive Cycle	3 Consecutive Cycle

• Assessment schedule:

- Intervention and assessment period – 3 months.
- Follow up – 2 months.
- Total duration of study – 5 months.

• Statistical Analysis:

- Wilcoxon Signed Ranked U Test
- Mann Whitney U Test
- Paired & Unpaired t Test

• Investigation:

- USG Abdomen and pelvis – Before treatment
- CBC (HB%) – Before treatment

• Observations:

Table 1: Distribution of Patients According to Age

Category	Group A	Group B	Total	Percentage
15-25 Years	4	8	12	30.00%

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26-35 Years	8	8	16	40.00%
36-45 Years	8	4	12	30.00%
Total	20	20	40	100.00%

Table 2: Distribution of Patients According to Chief Complaints

Category	Group A	Group B	Total	Percentage
Heavy Menstrual Bleeding	13	13	26	65.00%
Prolonged Menstrual Bleeding	7	7	14	35.00%
Total	20	20	40	100.00%

Table 3: Distribution of Patients According to Number of Pads Per Day

No. of Pads / Day	Group A (N)	Group B (N)	Total (N)	Total (%)
>7 pads/day	1	0	1	2.5%
6-7 pads/day	8	8	16	40.0%
5-6 pads/day	6	6	12	30.0%
3-4 pads/day	5	6	11	27.5%
Total	20	20	40	100.0%

Table 4: Distribution of Patients According to Duration of Menstruation

Category	Group A	Group B	Total	Percentage
3-5 Days	7	8	15	37.50%
5-6 Days	2	2	4	10.00%
6-7 Days	5	5	10	25.00%
8-10 Days	3	3	6	15.00%
>10 Days	3	2	5	12.50%
Total	20	20	40	100.00%

Table 5: Distribution of Patients According to Pain Score at Baseline (BT)

Pain Score	Group A (N)	Group B (N)	Total (N)	Total (%)
No Pain (Score 0)	13	13	26	65.0%
Very Mild Pain (Score 2)	3	2	5	12.5%
Mild Pain (Score 3)	3	4	7	17.5%
Moderate Pain (Score 4)	1	1	2	5.0%
Total	20	20	40	100.0%

Table 6: Distribution of Patients According to Clots During Menstruation

Category	Group A	Group B	Total	Percentage
Present	16	13	29	72.50%
Absent	4	7	11	27.50%
Total	20	20	40	100.00%

• **RESULTS:**

1. **Analysis of the Patients according to Amount of Bleeding**

Table A: Within-group analysis (Post-hoc Pairwise Comparison with Bonferroni Correction – All Pairs): Amount of Bleeding

Group	Comparison	Pre Mean	Post Mean	% Improvement	Adj. p-value	Remark
Group A	BT vs AT	2.25	1.70	24.4%	0.132	NS
Group B	BT vs AT	2.10	1.35	35.7%	0.035	S

In Group A, the mean score decreased by 2.25 to 1.70, but the change was not statistically significant ($p = 0.132$). In Group B, the mean score reduced by 2.10 to 1.35, which was statistically significant ($p = 0.035$), indicating better control of menstrual blood loss.

Table B: Between-group analysis (Mann-Whitney U Test): Amount of Bleeding

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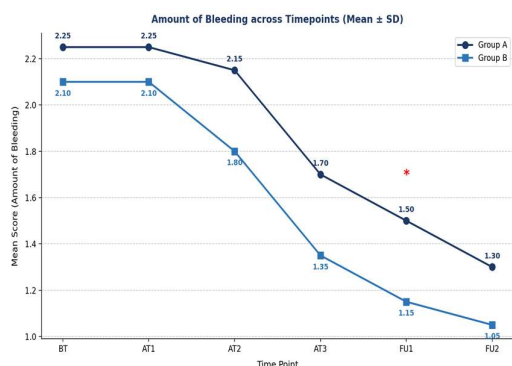
Time	Gr A Median (IQR)	Gr A M. R.	Gr B Median (IQR)	Gr B M. R.	U	Z	p-value	Remark
BT	2.0 (1.75)	21.5	2.0 (2.00)	19.5	183.0	-0.488	0.626	NS
AT	1.5 (1.00)	22.0	1.0 (1.00)	18.0	156.0	-1.352	0.176	NS

Between-group comparison showed no significant difference at baseline and after treatment.

Table C: Overall test of change across time (Friedman Test): Amount of Bleeding

Group	N	Test	χ^2 Statistic	df	p-value	Remark
Group A	20	Friedman	61.992	5	<0.001	S
Group B	20	Friedman	61.541	5	<0.001	S

Overall, both interventions reduced menstrual bleeding, but Group B demonstrated greater and statistically significant improvement, suggesting superior efficacy in controlling Heavy Menstrual Bleeding.



Analysis of the Patients according to Duration of Bleeding

Table A: Within-group analysis (Post-hoc Pairwise Comparison with Bonferroni Correction – All Pairs): Duration of Bleeding

Group	Comparison	Pre Mean	Post Mean	% Improvement	Adj. p-value	Remark
Group A	BT vs AT	2.25	2.15	4.44	0.377	NS
Group A	BT vs AT2	2.25	2.15	4.44	0.377	NS
Group A	BT vs AT3	2.25	1.70	24.44	0.132	NS
Group A	BT vs FU1	2.25	1.50	33.33	0.001	S
Group A	BT vs FU2	2.25	1.30	42.22	0.001	S
Group A	AT vs AT2	2.15	2.15	0.00	0.999	NS
Group A	AT vs AT3	2.15	1.70	20.93	0.001	S
Group A	AT vs FU1	2.15	1.50	30.23	0.001	S
Group A	AT vs FU2	2.15	1.30	39.53	0.001	S
Group A	AT2 vs AT3	2.15	1.70	20.93	0.001	S
Group A	AT2 vs FU1	2.15	1.50	30.23	0.001	S
Group A	AT2 vs FU2	2.15	1.30	39.53	0.001	S
Group A	AT3 vs FU1	1.70	1.50	11.76	0.001	S
Group A	AT3 vs FU2	1.70	1.30	23.53	0.001	S
Group A	FU1 vs FU2	1.50	1.30	13.33	0.001	S
Group B	BT vs AT	2.10	2.10	0.00	0.999	NS
Group B	BT vs AT2	2.10	1.80	14.29	0.001	S
Group B	BT vs AT3	2.10	1.35	35.71	0.001	S
Group B	BT vs FU1	2.10	1.15	45.24	0.001	S
Group B	BT vs FU2	2.10	1.05	50.00	0.001	S
Group B	AT vs AT2	2.10	1.80	14.29	0.001	S
Group B	AT vs AT3	2.10	1.35	35.71	0.001	S
Group B	AT vs FU1	2.10	1.15	45.24	0.001	S
Group B	AT vs FU2	2.10	1.05	50.00	0.001	S
Group B	AT2 vs AT3	1.80	1.35	25.00	0.001	S
Group B	AT2 vs FU1	1.80	1.15	36.11	0.001	S
Group B	AT2 vs FU2	1.80	1.05	41.67	0.001	S
Group B	AT3 vs FU1	1.35	1.15	14.81	0.001	S
Group B	AT3 vs FU2	1.35	1.05	22.22	0.001	S
Group B	FU1 vs FU2	1.15	1.05	8.70	0.001	S

Group	BT vs AT	2.10	1.65	21.4%	0.377	NS
Group B	BT vs AT	2.00	1.40	30.0%	0.132	NS

In Group A, the mean score decreased from 2.10 to 1.65, but the change was not statistically significant ($p = 0.377$). while Group B, the mean score decreased from 2.0 to 1.40, but the change was not statistically significant ($p = 0.132$). Although Group B demonstrated greater improvement, but the changes within both groups were not statistically significant after Bonferroni correction ($p > 0.05$).

Table B: Between-group analysis (Mann-Whitney U Test): Duration of Bleeding

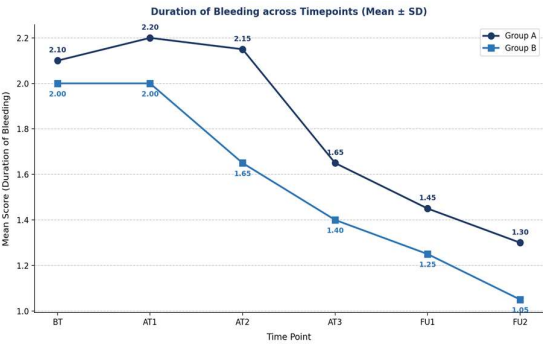
Time	Gr A Median (IQR)	Gr A M. R.	Gr B Median (IQR)	Gr B M. R.	U	Z	p-value	Remark
BT	2.0 (2.00)	21.0	2.0 (2.00)	20.0	190.0	-0.284	0.776	NS
AT	1.0 (1.75)	21.5	1.0 (1.00)	19.5	173.0	-0.864	0.388	NS

Between-group analysis revealed no significant differences at baseline, after treatment ($p > 0.05$), indicating comparable efficacy of both interventions in reducing the duration of bleeding.

Table C: Overall test of change across time (Friedman Test): Duration of Bleeding

Group	N	Test	χ^2 Statistic	df	p-value	Remark
Group A	20	Friedman	56.041	5	<0.001	S
Group B	20	Friedman	52.350	5	<0.001	S

Overall, both treatments produced a clinically meaningful reduction in the duration of menstrual bleeding, with Group B showing relatively greater improvement, although the differences were not statistically significant.



Analysis of the Patients according to Pain during menstruation

Table A: Within-Group Comparison: Post-Hoc All Pairwise Comparisons — Wilcoxon Signed-Rank Test (Bonferroni Corrected): Pain during menstruation

Group	Comparison (Sample 1 vs Sample 2)	Pre Mean	Post Mean	% Change	Sig.	Adj. Sig. (Bonferroni)	Remark
Group A	BT vs AT	0.9500	0.8000	15.79%	0.49	1.000	NS
Group B	BT vs AT	1.0000	0.5500	45.00%	0.083	1.000	NS

In Group A, the mean score decreased from 0.95 at baseline to 0.80 after treatment, representing a 15.79% reduction, but the improvement was not significant after Bonferroni correction ($p = 1.000$). Similarly, in Group B, the mean score decreased from 1.00 to 0.55, showing a 45.00% reduction, yet the change also failed to reach statistical significance ($p = 1.000$).

Table B: Between-Group Comparison — Mann-Whitney U Test: Pain during menstruation

Time Point	Group A (n=20)		Group B (n=20)		Mann-Whitney U	Z	p-value	Remark
	Median	Mean	Median	Mean				

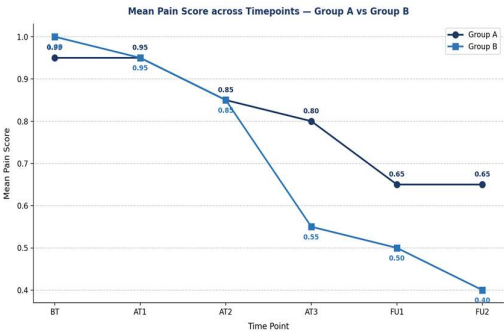
	(IQ R)	Rank	(IQ R)	Rank				
BT	0.000 (2.00)	20.35	0.000 (2.75)	20.65	197.0	-0.096	0.924	NS
AT	0.000 (2.00)	21.23	0.000 (1.00)	19.77	185.5	-0.464	0.642	NS

Between-group analysis revealed no significant differences between the groups at baseline and after treatment ($p > 0.05$).

Table C: Overall test of change across time—Friedman’s Two-Way Analysis of Variance by Ranks: Pain during menstruation

Group	Total N	Test Statistic (χ^2)	Degrees of Freedom	p-value	Remark
Group A	20	20.115	5	0.001	S
Group B	20	32.354	5	<0.001	S

Friedman's test revealed a statistically significant reduction in menstrual pain over time in both Group A ($p = 0.001$) and Group B ($p < 0.001$).



Analysis of the Patients according to Clots during menstruation

Table A: Within-group analysis (Post-hoc Pairwise Comparison with Bonferroni Correction – All Pairs): Clots during menstruation

Group	Comparison	Pre Mean	Post Mean	% Improvement	Adj. p-value	Remark
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Gro up A	BT AT	vs	0.8 0	0.4 5	43.75%	0.1 80	NS
Gro up B	BT AT	vs	0.6 5	0.1 5	76.92%	0.1 80	NS

In Group A, the mean score decreased from 0.80 to 0.45 after treatment, showing a 43.75% improvement, while Group B showed a greater reduction from 0.65 to 0.15, corresponding to a 76.92% improvement. Despite these improvements, the within-group changes were not statistically significant after Bonferroni correction ($p > 0.05$).

Table B: Between-group analysis (Mann-Whitney U Test): Clots during menstruation

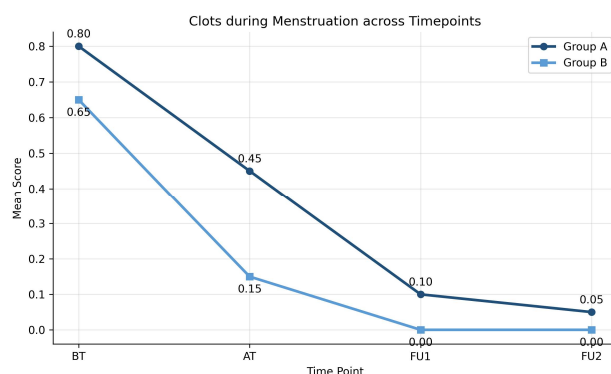
Ti me	Gr A Me dia n (IQ R)	Gr A M. R.	Gr B Me dia n (IQ R)	Gr B M. R.	U	p- val ue	Re mar k
B T	1.0 (1.0 0)	22 .0 0	19. 00	1.0 (1. 00)	23 0. 0	0. 30 2	NS
A T	0.5 (1.0 0)	23 .5 0	17. 50	0.0 (0. 00)	26 0. 0	0. 05 1	NS

Between-group analysis revealed no significant differences between the groups at baseline and after treatment ($p > 0.05$).

Table C: Overall test of change across time (Friedman Test): Clots

Gro up	N	Test	χ^2 Statis tic	d f	p- valu e	Rem ark
Gro up A	2 0	Fried man	53.32 1	5	<0.0 01	S
Gro up B	2 0	Fried man	46.87 5	5	<0.0 01	S

Both groups showed a reduction in clot passage; however, the changes were not statistically significant. Overall, both groups are equally effective.



Analysis of the Patients according to PBAC Score

Table A: Within-group analysis (Paired t-test): PBAC Score

G ro up	Com pari son	Pr e M ea n	Po st M ea n	M ea n Di ff	% Impr ovem ent	t- va lu e	p- va lu e	Re mar k
Gr ou p A	BT vs AT	142. 45	104. 95	37. .50	26.3 %	13. 76	<0. .01	Sig .
Gr ou p B	BT vs AT	133. 60	99. 45	34. .15	25.6 %	13. 31	<0. .01	Sig .

In Group A, the mean score decreased from 142.45 to 104.95, with a 26.3% improvement, and change was statistically significant ($p = <0.001$). Similarly, Group B showed a reduction from 133.60 to 99.45, corresponding to a 25.6% improvement, and change was statistically significant ($p = <0.001$).

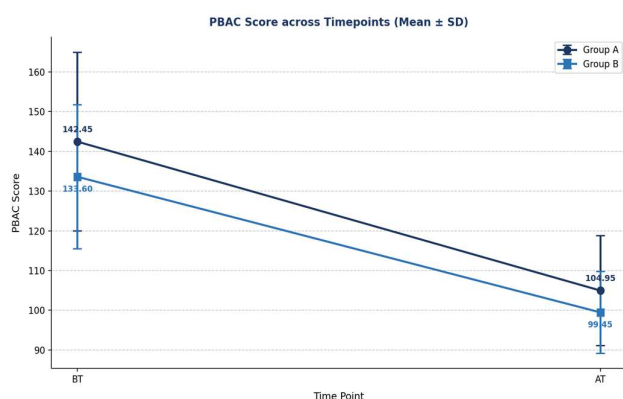
Table B: Between-group analysis (Independent t-test): PBAC Score

Ti me	Gro up A Mea n (SD)	Gro up B Mea n (SD)	t	d f	p- val ue	Me an Diff	Rema rk
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BT	142.45 (22.50)	133.60 (18.16)	1.369	38	0.179	8.85	NS
AT	104.95 (13.83)	99.45 (10.31)	1.426	38	0.162	5.50	NS

Between-group analysis revealed no significant difference between the groups at baseline ($p = 0.179$) or after treatment ($p = 0.162$), indicating that both groups were comparable and equally effective in reducing menstrual blood loss.



Discussion:

Heavy Menstrual Bleeding (HMB) can be correlated with *Asrigdara* in Ayurveda, a condition predominantly caused by vitiation of *Pitta Dosha*, *Rakta Dushti*, and disturbed *Apana Vata*, leading to excessive and prolonged menstrual bleeding. The present study demonstrated that both *Shatavari Guda* and *Kushmandaka Rasayana* produced significant improvement in the clinical features of HMB, including reduction in the amount of bleeding, duration of bleeding, passage of clots, menstrual pain, and PBAC score.

The improvement observed in both the amount and duration of bleeding may be attributed to the *Madhura Rasa*, *Sheeta Veerya*, *Vata-Pittashamaka*, and *Rasayana* properties of *Shatavari Guda* and *Kushmandaka Rasayana*, which help alleviate aggravated *Pitta* and *Rakta Dushti*.^{6,7} The antioxidant and anti-inflammatory constituents of *Shatavari*, *Kushmanda*, *Sariva*, *Ushira*, *Madhuka*, *Bhumyamalaki*, *Patha*, *Lavanga*, and *Ela* reduce endometrial inflammation, oxidative stress, and vascular fragility, thereby improving endometrial stability and controlling abnormal uterine bleeding.^{10,11,12} *Shatavari* provides phytoestrogenic and endometrial protective effects that support hormonal balance and menstrual regulation,^{10,13,14} while *Kushmanda* promotes

tissue healing and restoration of endometrial integrity.^{11,12} *Brimhana* and *Rasayana* drugs such as *Vidari*, *Musali*, *Gokshura*, *Shilajit*, *Ghritha*, *Sharkara*, and *Guda* aid tissue repair and restoration of normal uterine function.^{8,9} Additionally, *Trikatu* and other *Deepana-Pachana* drugs enhance digestion and bioavailability of active constituents.¹⁵ Collectively, these actions stabilize the endometrium, strengthen uterine tissues, facilitate timely cessation of bleeding, and thereby reduce both the amount and duration of bleeding in patients with Heavy Menstrual Bleeding.

The reduction in menstrual pain may be attributed to the anti-inflammatory, analgesic, antispasmodic, antioxidant, and *Vata-Pittashamaka* properties of both formulations.^{6,7} Constituents such as *Shunthi*, *Pippali*, *Patha*, *Ajaji*, and *Lavanga* help to reduce prostaglandin-mediated uterine contractions, inflammation, and muscle spasms.^{11,12,15} Antioxidant-rich ingredients such as *Shatavari*, *Kushmanda*, *Sariva*, *Ushira*, *Madhuka*, *Bhumyamalaki*, *Patha*, and *Lavanga* further reduce tissue irritation and oxidative stress,^{10,11,12} while *Rasayana* and *Balya* drugs promote tissue nourishment and restoration of normal uterine function.^{6,7,8,9} Collectively, these actions help regulate *Apana Vata*, alleviate uterine spasms, and reduce pain during menstruation.

The reduction in the passage of clots during menstruation may be attributed to the *Pittashamaka*, *Raktaprasadana*, antioxidant, and endometrial stabilizing properties of *Shatavari Guda* and *Kushmandaka Rasayana*.^{6,7} By reducing endometrial inflammation, oxidative stress, and vascular fragility, these formulations improve endometrial integrity and promote a regular menstrual flow.^{10,11,12} *Shatavari* supports hormonal balance and endometrial stabilization,^{10,13,14} while *Kushmanda* enhances tissue healing and vascular stability.^{11,12} These actions help prevent excessive bleeding, reduce blood pooling within the uterine cavity, and minimize clot formation and passage during menstruation.

Conclusion:

- *Shatavari Guda* and *Kushmandaka Rasayana* both are effective in Heavy Menstrual Bleeding.
- On Comparison, *Kushmandaka Rasayana* is more effective than *Shatavari Guda* in Heavy Menstrual Bleeding.

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