AYUSHDHARA
ISSN: 2393-9583 (P)/ 2393-9591 (O)
An International Journal of Research in AYUSH and Allied Systems

Research Article

A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF *KUSHAMOOLA* AND *BALA MOOLA CHURNA* IN *RAKTAPRADARA* W.S.R TO DYSFUNCTIONAL UTERINE BLEEDING

Mule Rutuja Eknath[1]*, Sujata Patil[2], Suprabha Hegade[3], Shreyes. S[4]

*[1]PG Scholar, [2]HOD & Professor, [3]Professor, [4]Associate Professor, Department of PG Studies in Prasuti Tantra and Stree Roga, Rajiv Gandhi Education Society's Ayurvedic Medical College and Hospital, Ron, Karnataka, India.

Article info

Article History:
Received: 30-07-2024
Accepted: 17-08-2024
Published: 20-09-2024

KEYWORDS:
Raktapradara, DUB, Ayurveda, Kushamoola churna, Balamoola churna.

ABSTRACT

Raktapradara is a disease affecting the female reproductive system and manifesting as excessive bleeding per vagina. It is one of the major gynaecological issues associated with severe bleeding accompanied either with or no menstruation. This can be correlated to Dysfunctional uterine bleeding which is also called as abnormal uterine bleeding that presents without organic, systemic, and iatrogenic causes. **Design:** This was a randomized controlled comparative clinical study including 40 patients categorized into two groups as Group A and Group B. The present study evaluated the efficacy of *Kushamoola churna* and *Balamoola mula churna* with both subjective and objective parameters with 5 assessments as 1st day before the treatment, on 30th day after 1 month, 60th day after 2 months, 90th day after 3 months and the follow up was done on 120th day, 4th month. **Intervention:** Group A received *Kushamoola mula churna* 3gm with *Tandulodaka anupana* before food, thrice a day for 30 days from 5th day of the menstrual cycle in 3 cycles. Group B received *Balamoola churna* was with *Sita* and *Tandulodaka* as *Anupana* thrice a day 5th day of the menstrual cycle for 30 days in 3 cycles. **Results:** Both between and within groups with repeated measures analysis of variance (RMANOVA) with Bonferroni showed significant changes in Group A *(Kushamoola churna)* compared to Group B *(Balamoola churna)* on pain, duration of the menstrual flow, interval between the menstrual cycle, amount of menstrual bleeding loss, consistency of bleeding, staining, intensity of pain during menstruation and colour of menstrual bleeding with ($p \leq 0.05$). **Conclusion:** *Kushamoola churna* is effective compared to *Balamoola churna* in patients suffering from *Rakta pradara*.

INTRODUCTION

As per WHO, today women's health has become the top priority due to the rise in gynaecological disorders and their impact on the quality of life. Guidelines of WHO aims towards improving the health, health care concerned with women and well-being of women across the world.[1] Heavy, excessive, and prolonged bleeding with more frequency which is neither due to pregnancy nor pelvic disease and having its origin from uterus is known as or AUB.

Access this article online

Quick Response Code

https://doi.org/10.47070/ayushdhara.v11i4.1684

It is classified into two types as ovulatory and anovulatory DUB. Among the two, ovulatory DUB is the causative factor 80% of the cases and is more likely to affects of the reproductive age group women, whereas anovulatory DUB is observed in young girls at menarche and women in the stage of perimenopause. Studies report that 60% of these women with DUB or AUB undergo hysterectomy in the next few years.[2] DUB has 3%-30% of worldwide prevalence and most commonly occurs when the menstrual cycle initially begins, during the menarche or at the verge of menopause.[3] Patients with menorrhagia also present with DUB as the cause in 80% of patients.[4]

In Ayurveda, *Raktapradara* can be understood as DUB based on the features of the disease. As per Ayurvedic principles, *Rakta Pradara* is explained as one of the *Rakta Pradoshaja Vikara*, the one which is caused by the *Rakta dosha* and presents with *Artava*

Ati Pravrutti, *Anruta Kala Pravrutti, Daha* in *Adho Vankshana Pradesha, Sroni, Angamardha, Deerga Kala Pravrutti* associated with *Kuskhi* and *Prushta Shoola*. Based on the Ayurveda pathology, *Raktapradara* is caused by *Vata* and *Pitta Doshas* and thereby *Chikitsa* consisting of *Kashaya Rasa* and *Pittashamaka dravyas* should be administered. [5]

Sedentary lifestyle habit which is the trending of this generation has been observed to cause the oestrogen disturbance and increase in the blood supply and vasodilatation of the endometrium. Anovulatory dysfunctional uterine bleeding is commonly seen at both at menarche and menopausal stages due to the hypothalamic immaturity and perimenopausal changes whereas, ovulatory DUB is mostly observed in the mid aged females in the age of 30s and its mechanism is obscure. Exclusion of pregnancy and other organic diseases are ruled out by the physical examination and diagnostic tests.[6] In modern medicine, DUB is treated with both conservative and surgical management that includes NSAIDs, combined OCPs, danazol etc. Study of Morana B et al has reported that the medical treatment of DUB has relieved the complaints of patients for a short period.[7] If oral therapy fails then surgical intervention is the option. With the knowledge of the adverse effects and the fear of surgeries, many patients resort to Ayurveda and herbal treatments which are considered as the traditional medicine, Indian medicine or the CAM (Complementary and Alternative Medicine).

According to a study, the usage of CAM in Obstetrics and Gynecology is 68% (95% CI, 63–73%) and is highest among the other specialities. Among the CAM, Ayurveda was the most frequently used CAM (56.7%) and herbal medicines (14.4%) is mentioned separately.[8] Ayurveda is attaining the global recognition due to its holistic and preventive approach and its authenticity since ages. Ayurveda treatment in addition to relieving the problem of the patient, also corrects the hormonal imbalance of the reproductive system and provides an overall positive health and well-being for the women. Studies on Kushamoola churna and Balamoola churna were available for other disorders but not on Raktapradara. With this view, in the present study an attempt was made to evaluate the clinical efficacy of Kushamoola churna and Balamoola Churna in the management of Rakta Pradara w.s.r to Dysfunctional Uterine Bleeding- A clinical randomized controlled comparative study.

Methodology

Source of Data

Female patients with the features of Rakta Pradara were recruited from the outpatient and in-patient Department of Prasooti Tantra Evam Stree Roga at R.G.E.S Ayurvedic Medical College and Hospital Ron.

Selection of the Patients

Female patients were selected from the outpatient and in-patient department of Prasooti Tantra Evam Stree Roga at R.G.E.S Ayurvedic Medical College and Hospital Ron.

Study Design

This was a randomized comparative clinical study. It included 40 patients assigned into two groups, Group A and Group B each with 20 patients respectively. After the initial screening, patients who fulfilled the eligible criteria were assigned into the groups. A special case proforma was prepared including history taking, physical examination, abdominal examination and investigations. Group A received *Kushamoola churna* 3gm with *Tandulodaka anupana* before food, thrice a day for 30 days from 5th day of the menstrual cycle in 3 cycles. *Balamoola churna* was given with *Sita* and *Tandulodaka* as *Anupana* thrice a day 5th day of the menstrual cycle for 30 days in 3 cycles. Duration of the study was 90 days and follow up was done on every 30th day for 03 months and 4th follow up on 120th day.

Inclusion Criteria

Female patients between the age groups of 20 – 40 years, patients with the *Lakshanas* of *Rakta Pradara*, patients with complaints of excess of bleeding per vagina, altered menstrual cycle and patients diagnosed as dysfunctional uterine bleeding were included for the study.

Exclusion Criteria

Patients below 20 years and more than 40 years, patients with thyroid dysfunction, DM, HTN, patients with threatened or spontaneous or incomplete abortion or ectopic pregnancy, patients with IUCD, polyp, benign and malignant, bleeding diathesis like thrombocytopenia etc., ovarian benign and malignant tumour, CA cervix, uterine polyps, other any pelvic-inflammatory diseases, patient with IUD and sexually transmitted diseases were excluded from the study.

Assessment Criteria

Assessments will be carried out before the treatment on the 1st day, 30th day, during the treatment and 60th day after the treatment and the follow up on 120th day.

Subjective Parameters

Pain

Objective Parameters (Menstrual Bleeding)

1. Duration of the menstrual flow
2. Interval between the menstrual cycle
3. Amount of menstrual bleeding loss
4. Consistency of bleeding

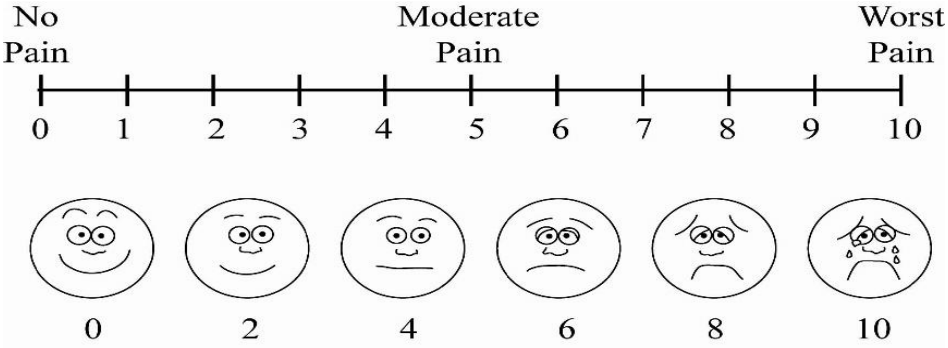
5. Staining
6. Intensity of pain during menstruation
7. Colour of menstrual bleeding

Grading of Parameters

All the symptoms were graded before, during and after the treatment.

Subjective Parameters

Pain: This was assessed using the Visual analogue scale



Objective Parameters (Table 1- 6)

Table1: Duration of the Menstrual Flow

S.No	Duration of the Menstrual flow	Grading
1.	1 - 5 days	0
2.	6 - 7 days	1
3.	8- 9 days	2
4.	> 10 days	3

Table 2: Interval Between the Menstrual Cycle

S.No	Interval between the Menstrual cycle		Grading
1.	Normal	28 to 32 days	0
2.	Frequent	Menstrual bleeding occurring at 21 days cycle or less	1
3.	Inter Menstrual	Menstrual bleeding occurring at 15 to 16 days cycle	2
4.	Delayed	Menstrual bleeding occurring > 35 days	3

Table 3: Amount of Menstrual Bleeding Loss

S.No	Amount of menstrual bleeding loss	Grading
1.	1 to 3 pads/day	0
2.	4 to 6 pads/day	1
3.	7 to 9 pads/day	2

Table 4: Consistency Of Bleeding

S.No	Consistency of bleeding	Grading
1.	Watery	1
2.	Watery + clots	2
3.	Clots (mild)	3
4.	Clots (moderate)	4
5.	Clots (severe)	5

Table 5: Staining

S.No	Staining	Grading
1.	Present	1
2.	Absent	0

Table 6: Intensity of Pain During Menstruation

S.No	Intensity of pain during menstruation	Grading
1.	Absent	0
2.	Mild	1
3.	Moderate	2
4.	Severe	3

Table 7: Colour of Menstrual Bleeding

S.No	Colour of menstrual bleeding	Grading
1.	Absent	0
2.	Light red	1
3.	Dark red	2
4.	Blackish colour	3

Intervention

Group A received *Kushamoola churna* 3gm with *Tandulodaka anupana* before food, thrice a day for 30 days from 5th day of the menstrual cycle in 3 cycles. Group B received *Balamoola churna* was with *Sita* and *Tandulodaka* as *Anupana* thrice a day 5th day of the menstrual cycle for 30 days in 3 cycles. Duration of the study was 90 days and follow up was done on every 30th day for 3 months and 4th follow up on 120th day. Follow up will be done after the treatment on 120th day (4th month).

Ethical Clearance

The study was approved by the IRB of Institutional Ethical Committee of R.G.E.S Ayurvedic Medical College and Hospital Ron. signed informed consent was obtained from all the patients. The statistician who did the randomization and data analysis and the researcher who carried out the assessments were blinded to the treatment status of the patients. Statistical analysis was done using appropriate statistical methods and results were interpreted.

OBSERVATIONS & RESULTS

This was a randomized controlled comparative clinical study including 40 patients categorized into two groups as Group A and Group B with 20 patients each. Group A was administered *Kushamoola churna* and Group B with *Balamoola moola churna.* There was 1 drop out in group A and 2 in the group B and the analysis was carried out on 37 patients. Forty patients with the features of *Rakta pradara* were included for the study. Demographic data is detailed in Table No.1 In this study maximum number of 25 (62.5%) patients were traced from the age group of 31-35 years, 30 (75%) patients were belonging to Hindu community, 22 (55%) patients had their high school education followed by 23 (57.5%) receiving primary education and only 10 (25%) were graduated, 24 (60%) patients belonged to lower middle class and 11(27.5%) were from lower class and middle class were 5 (12.5%). Non-working women include 31 (77.5%) and 24(60%) patients had their menarche at the age of 13 years.

Table 8: Demographic Data

Age		Group A	Group B
	20-25yrs	5	4
	26-30yrs	2	4
	31 -35yrs	13	12
	36-40yrs	0	0
Religion	Hindus	15	15
	Christians	2	1
	Muslims	3	4
Education	Primary	5	5
	High school	11	12
	Graduates	3	2
	Post Graduates	1	1
Economic Background	Low economic background	5	6
	Lower middle economic background	12	12
	Middle economic background	3	2

Occupation	Non-working	15	16
	Working	5	4
Age of Menarche	12yrs	4	6
	13yrs	13	11
	14yrs	2	2
	15yrs	1	1

The baseline data for the variables were normally distributed and did not differ significantly between the groups. Table 2 shows the results between and within groups on 1st day, 30th day, 60th day, 90th day and 120th day. Results showed significant reduction of all the parameters within groups (Group A and Group B). Between the groups Group A *(Kushamoola churna)* showed significant changes compared to Group B *(Balamoola churna).*

Between Group Results

Repeated measures analysis of variance (RMANOVA) with Bonferroni showed significant changes in Group A *(Kushamoola churna)* showed significant changes compared to Group B *(Balamoola churna)* with all the parameters with (p≤0.05).

Within Group Results

Pain

Group A *(Kushamoola churna)* a showed reduction in pain on 30th day (7.56±0.51), 60th day (3.28±0.67), 90th day (0.61±0.5) and on 120th day (0±0). Group B *(Balamoola churna)* also showed reduction in pain on 30th day (8.88±0.86), 60th day (6.29±0.77), 90th day (3.41±0.71) and on 120th day (1.94±0.66) compared to before treatment (p≤0.05).

Duration of the Menstrual flow

Group A *(Kushamoola churna)* showed reduction in the duration of the menstrual flow on 30th day (1.33±0.49), 60th day (0.5±0.51), 90th day (0.17±0.38) and on 120th day (0±0). Group B *(Balamoola churna)* also showed reduction in duration of the menstrual flow on 30th day (2.47±0.51), 60th day (2.18±0.53), 90th day (1.88±0.49) and on 120th day (1.29±0.47) compared to before treatment (p≤0.05).

Interval between the Menstrual cycle

Group A *(Kushamoola churna)* showed reduction in the interval between the menstrual cycle on 30th day (1.78±0.43), 60th day (0.72±0.46), 90th day (0.11±0.32) and on 120th day (0.28±0.46). Group B *(Balamoola churna)* also showed reduction in interval between the menstrual cycle on 30th day (2.53±0.51), 60th day (2±0), 90th day (1.88±0.33) and on 120th day (1.35±0.61) compared to before treatment (p≤0.05).

Amount of Menstrual bleeding loss

Group A *(Kushamoola churna)* showed reduction in Amount of Menstrual bleeding loss on 30th day (1.17±0.38), 60th day (0.78±0.43), 90th day (0.17±0.38) and on 120th day (0±0). Group B *(Balamoola churna)* also showed reduction in amount of menstrual bleeding loss on 30th day (2±0), 60th day (1.65±0.49), 90th day (1.47±0.51) and on 120th day (0.94±0.43) compared to before treatment (p≤0.05).

Consistency of bleeding

Group A *(Kushamoola churna)* showed reduction in consistency of bleeding on 30th day (3±0.59), 60th day (1.78±0.65), 90th day (1.11±0.32) and on 120th day (1±0). Group B *(Balamoola churna)* also showed reduction in consistency of bleeding on 30th day (3.82±0.39), 60th day (3.76±0.44), 90th day (2.88±0.49) and on 120th day (2.47±0.72) compared to before treatment (p≤0.05).

Staining

Group A *(Kushamoola churna)* showed reduction in staining on 30th day (1±0), 60th day (0±0), 90th day (0±0) and on 120th day (0.06±0.24). Group B *(Balamoola churna)* also showed reduction in staining on 30th day (1±0), 60th day (1±0), 90th day (0.76±0.44) and on 120th day (0.71±0.47) compared to before treatment (p≤0.05).

Intensity of pain during menstruation

Group A *(Kushamoola churna)* showed reduction in intensity of pain during menstruation on 30th day (2.17±0.51), 60th day (1.17±0.71), 90th day (0.44±0.51) and on 120th day (0±0). Group B *(Balamoola churna)* also showed reduction in intensity of pain during menstruation on 30th day (3±0), 60th day (2.59±0.51), 90th day (1.94±0.56) and on 120th day (1.47±0.51) compared to before treatment (p≤0.05).

Colour of menstrual bleeding

Group A *(Kushamoola churna)* showed reduction in colour of menstrual bleeding on 30th day (1.83±0.38), 60th day (0.72±0.46), 90th day (0±0) and on 120th day (0±0). Group B *(Balamoola churna)* also showed reduction in colour of menstrual bleeding on 30th day (2.94±0.24), 60th day (2.35±0.49), 90th day (1.94±0.24) and on 120th day (1.53±0.51) compared to before treatment (p≤0.05).

Table 9: Results in Group Group A

	Group A				
	Before Treatment	**30th Day**	**60th Day**	**90th Day**	**120th Day (After Treatment)**
	(Mean±SD)	**(Mean±SD)**	**(Mean±SD)**	**(Mean±SD)**	**(Mean±SD)**
VAS	10±0	7.56±0.51	3.28±0.67	0.61±0.5	0±0
DMF	3±0	1.33±0.49	0.5±0.51	0.17±0.38	0±0
IMC	3±0	1.78±0.43	0.72±0.46	0.11±0.32	0.28±0.46
A	2±0	1.17±0.38	0.78±0.43	0.17±0.38	0±0
C	5±0	3±0.59	1.78±0.65	1.11±0.32	1±0
S	1±0	1±0	0±0	0±0	0.06±0.24
IOP	3±0	2.17±0.51	1.17±0.71	0.44±0.51	0±0
CL	3±0	1.83±0.38	0.72±0.46	0±0	0±0

Table 10: Results in Group Group B

	Before Treatment	**30th Day**	**60th Day**	**90th Day**	**120th Day (After Treatment)**
	(Mean±SD)	**(Mean±SD)**	**(Mean±SD)**	**(Mean±SD)**	**(Mean±SD)**
VAS	10±0	8.88±0.86	6.29±0.77	3.41±0.71	1.94±0.66
DMF	3±0	2.47±0.51	2.18±0.53	1.88±0.49	1.29±0.47
IMC	3±0	2.53±0.51	2±0	1.88±0.33	1.35±0.61
A	2±0	2±0	1.65±0.49	1.47±0.51	0.94±0.43
C	5±0	3.82±0.39	3.76±0.44	2.88±0.49	2.47±0.72
S	1±0	1±0	1±0	0.76±0.44	0.71±0.47
IOP	3±0	3±0	2.59±0.51	1.94±0.56	1.47±0.51
CL	3±0	2.94±0.24	2.35±0.49	1.94±0.24	1.53±0.51

VAS- Visual Analogue scale, DMF- Duration of menstrual flow, IMC- Interval of menstrual cycle, A- Amount of Bleeding, C-Consistency of Bleeding, S-Staining, IOP – Intensity of Pain, CL-Colour of Bleeding

DISCUSSION

According to the International Federation of Gynaecology and Obstetrics (FIGO) the consensus on the terms and definitions of normal and abnormal uterine bleeding was published in 2007.[9] The acronym PALM-COEIN has been standardised and widely used for categorizing the causes of AUB such as for polyp (AUB-P), leiomyoma (AUB-L), adenomyosis (AUB-A), malignancy and hyperplasia (AUB-M), ovulatory dysfunction (AUB-O), endometrial (AUB-E), coagulopathy (AUB-C) and iatrogenic etc. PALM classification is very organized and structural and includes visual assessment by imaging and histopathological tests, whereas the COEIN classification is non-structural as per FIGO. [10] In Ayurvedic science, DUB can be correlated to *Raktapradara* and it characterises with excessive and irregularity of menstrual bleeding. *Raktapradara* is disease that presents with excessive bleeding per vaginum and is described as one of the *Rakta Pradoshaja Vikara.* It is also identified with *Asrifdara* as the synonym. Any deviation in the *Rutuchakra* or the menstrual rhythm is said to cause the irregular and uterine bleeding and this is defined as *Raktapradara* by *Sushrutha, Charaka* and *Vagbhatacharyas.* In depth description of *Raktapradara* with their aetiology, pathology, symptomatology, treatment and complications have been explained elaborately. *Acharya Vangasena* has quoted that *Raktapradara* is *Pranahara* and therefore precautions need to be taken to effectively cure the disease. *Acharya Charaka* has advocated the treatment of *Rakta Yoni* i.e., *Raktasthapana Oushadhas* for *Raktapradara* based on the *Doshas.* [11]

Medical management of DUB has the drawback in addition to the adverse effects with the short term relief and its effects lasts until the patient consumes the medication. Whereas, surgical management concentrates mainly on the hysterectomy and the endometrial ablation and it is still obscure as to which one is superior compared to both, in terms of patient

satisfaction, relief, and long-term outcomes. [12] Among the eight branches of Ayurveda, Prasooti tantra and stree roga exclusively focuses on the women health taking a complete care of a women beginning with menarche to menopause. In addition to treatment for various gynaecological disorders of women, it also advocates various regimens such as *Ruthumathicharya, Garbhasamskara Garbhini paricharyas, Soothika paricharya* etc beginning with menarche, pregnancy, puerperal care and till menopause. Ayurveda emphasizes the importance of women's health as she is the root cause of healthy progeny. *Raktapradara* is a disease known to mankind since the age of *Veda* and *Puranas*. In the *Yonivyapat chikitsa* of *Charaka samhita*, Acharya Charaka has explained *Pradara* as a separate disease entity with its management. Acharya Sushruta has explained it in the *Shrukra Shonit Adhyaya* of *Shaarirasthana* whereas, Vagbhata has explained *Rakta Yoni* and opined both *Asrigdara* and *Pradara* as its *Paryaya padas*. Ayurveda has vast literature on *Rakta pradara* and its management with effective combination of drugs and hence it can be managed effectively. [13]

This was a randomized controlled study (www.randomizer.com) that compared two interventions. In the present study, 40 female patients with the complaints of *Rakta pradara* were randomly recruited and divided into 2 groups Group A and Group B. Group A was administered *Kushamoola churna* and Group B was given *Balamoola Churna*. The present study evaluated the efficacy of *Kushamoola churna* and *Balamoola churna* on pain, duration of the menstrual flow, interval between the menstrual cycle, amount of menstrual bleeding loss, consistency of bleeding, staining, intensity of pain during menstruation and colour of menstrual bleeding etc subjective and objective parameters with 5 assessments as on 1st day before the treatment, on 30th day after 1 month, 60th day after 2 months, 90th day after 3 months and the follow up was done on 120th day, 4th month. The data were analysed using SPSS Version 10. Repeated measures analysis of variance (RMANOVA) with Bonferroni was used for assessing 'within' and 'between' groups differences, respectively. In the present study, the drug *Kushamoola churna* and *Balamoola churna* mentioned in *Bhaisajya Rathnavali* is being studied to evaluate its efficacy in *Rakta pradara*.

The drugs used in the present study, *Kusha* is a known and widely used drug in Ayurvedic Pharmaceutics. It possesses *Madhura* and *Kashaya Rasa, Laghu* and *Snigdha Guna, Sheetha Veerya* and *Madhura vipaka*. Due to its *Pittagna* and *Rakta pitta* property of *Madhura Rasa, Stambana* and *Ropana* bleeding stops. *Kashaya Rasa* has *Stambhana* property because of *Prithvi* and *Vayu Mahabhootas*. *Sheetha Veerya* of *Kusha* helps to stop excess bleeding due the *Hima* property. Based on the *Vyadhi Pratyaneeka Chikitsa*, *Kusha moola* acts as *Sthambhana*, *Rakta Shodhaka, Raktapittahara* and *Grahi*. *Kusha* helps in undergoing a series of cyclical changes in accordance with the influence of the hormones in the endometrium, seat of *Artava* and the *Bahirpushpa*. Hence the *Chikitsa sutra* of *Raktapradara* are *Rakta Shodhana*, *Vatanulomana*, *Raktastambhana, Pitta Kapha Samaka* and providing strength to the *Garbhashaya*. [11] Study of Khusbhoo et al in their review mentions about the administration of *Kushamoola churna* in the management of *Raktapradara* that are described in Ayurvedic classics. [13] One more drug of the study known as *Bala* or the *Sida corifolia* belongs to Malvaceae family is widely spread medicinal plant is common in India and Srilanka. It the study of Manasi PS et al, *Bala Moola Churna* was effective in reducing the symptoms of *Rakta pradara* or *Asrigdara* at the end of treatment. According to Raja Nighatu, *Bala Moola* is said to possesses *Madhura Rasa* and *Tikta Rasa*. [14]

In the present study *Tandulodaka* is used as the *Sahapana* for both *Kushamoola* and *Balamoola churna*. Due to its *Madhura Rasa, Laghu* and *Snigdha Guna*, *Sheeta Veerya, Madhura vipaka, Pitta Shamaka* and *Balya* properties it helps in clearing out the chronic infection of uterus and pelvic congestion thereby reducing the loss of menstrual blood. It also possess properties such as anti-diarrhoeal, anti-dysentric and anti-fungal. In addition to these, vitamin B complex present in *Tandulodaka* helps to normalize estrogen metabolism of the uterus and thiamine improves the endothelial activity of the arteries supplying the uterus and its surrounding structures and controls bleeding. [15] Present study showed the significant changes in Group A *(Kushamoola churna)* showed significant changes compared to Group B *(Balamoola churna)* with all the parameters with ($p \leq 0.05$) on pain, duration of the menstrual flow, interval between the menstrual cycle, amount of menstrual bleeding loss, consistency of bleeding, staining, intensity of pain during menstruation and colour of menstrual bleeding. This authenticates the role of drug and medicines that are quoted in Ayurvedic science and it further validates the concepts of the science to be applied in further researches.

CONCLUSION

Present study showed the significant changes in Group A *(Kushamoola churna)* showed significant changes compared to Group B *(Balamoola churna)* with all the parameters with ($p \leq 0.05$) on pain, duration of the menstrual flow, interval between the menstrual cycle, amount of menstrual bleeding loss,

consistency of bleeding, staining, intensity of pain during menstruation and colour of menstrual bleeding. This authenticates the role of drug and medicines that are quoted in Ayurvedic science and it further validates the concepts of the science to be applied in further researches.

REFERENCES

1. Davidson PM, McGrath SJ, Meleis AI et al. The health of women and girls determines the health and well-being of our modern world: A white paper from the International Council on Women's Health Issues. Health Care Women Int. 2011 Oct; 32(10): 870-86. doi: 10.1080/07399332.2011. 603872. PMID: 21919625; PMCID: PMC3703826.
2. Coulter A, Bradlow J, Agass M. Outcomes of referral to gynecology outpatient clinics for menstrual problems: An audit of general practice records. Br J Obstet & Gynecol 1991; 98: 789-96.
3. Davis E, Sparzak PB. Abnormal Uterine Bleeding. [Updated 2023 Sep 4]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan. Available from: https://www.ncbi.nlm.nih.gov/books/NBK532913
4. CameronIT (1989). "Dysfunctional uterine bleeding". Baillieres Clin Obstet Gynaecol. 3 (2): 315–27. doi: 10.1016/s0950-3552(89)80024-0. PMID 2692922.
5. Dr. Samrajita Suhas Thorat, & Dr. Suhas Bajirao Thorat. (2021). Review on Raktapradara (menorrhagia) and its management. Journal of Ayurveda and Integrated Medical Sciences, 6(01), 229-234. https://doi.org/10.21760/jaims.v6i01.1211
6. Davis E, Sparzak PB. Abnormal Uterine Bleeding. [Updated 2022 Sep 9]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK532913
7. MoranaB, ZarboR, PuglisiF, ZarboG. Dysfunctional uterine bleeding: Medical therapies. Minerva Ginecol 2003; 55:241-5.
8. Phutrakool, P., Pongpirul, K. Acceptance and use of complementary and alternative medicine among medical specialists: a 15-year systematic review and data synthesis. Syst Rev 11, 10 (2022). https://doi.org/10.1186/s13643-021-01882-4
9. Sun Y, Wang Y, Mao L, Wen J, Bai W. Prevalence of abnormal uterine bleeding according to new International Federation of Gynecology and Obstetrics classification in Chinese women of reproductive age: A cross-sectional study. Medicine (Baltimore). 2018 Aug; 97(31): e11457. doi: 10.1097/MD.0000000000011457. PMID: 30075511; PMCID: PMC6081150.
10. Munro MG, Critchley HO, Broder MS, et al. FIGO Working Group on Menstrual Disorders. FIGO classification system (PALMCOEIN) for causes of abnormal uterine bleeding in non-gravid women of reproductive age. Int J Gynaecol Obstet 2011; 113:3–13. [PubMed] [Google Scholar] [Ref list]
11. Rachana HV, Jayashri S. Deshmukh. The effect of Kushamoola in the management of Rakthapradara - A Clinical Study. J Ayurveda Integr Med Sci 2017; 5: 11-15. http://dx.doi.org/10.21760/jaims.v2i05.10248
12. Chen BH, Giudice LC. Dysfunctional uterine bleeding. West J Med. 1998 Nov; 169(5): 280-4. PMID: 9830356; PMCID: PMC1305317.
13. Jha K , Bharathi K, Jha K, Sonu, Anu MS, Compilation of Management of Asrigdara from various Ayurvedic classic text books, The Healer Journal, 2021; 2(1): 100-110
14. Manasi PS et al. A clinical study for the evaluation of the effect of bala moola churna in asrigdara. Int. J. Res. Ayurveda Pharm. 2021; 12(6): 17-20 http://dx.doi.org/10.7897/2277-4343.1206163
15. Fathima, Noor & K.V, Mamatha. (2022). Analysis on Action of Rakthasthambhaka Dravya's in Asrigdhara with special reference to Abnormal Uterine Bleeding. AYUSHDHARA. 50-61. 10.47070/ayushdhara.v9i Suppl1.1030.

Cite this article as:
Mule Rutuja Eknath, Sujata Patil, Suprabha Hegade, Shreyes. S. A Comparative Clinical Study to Evaluate the Efficacy of Kushamoola and Bala Moola Churna in Raktapradara w.s.r to Dysfunctional Uterine Bleeding. AYUSHDHARA, 2024;11(4):1-8.
https://doi.org/10.47070/ayushdhara.v11i4.1684
Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**
Dr. Mule Rutuja Eknath
PG Scholar
Department of PG Studies in Prasuti Tantra and Stree Roga,
Rajiv Gandhi Education Society's Ayurvedic Medical College and Hospital, Ron, Karnataka.
Email id: rutujam9899@gmail.com