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Research Article

CLINICAL STUDY OF *BABOOL* (*ACACIA ARABICA* WILLD.) AND *KUKUNDAR* (*BLUMEA LACERA* D.C.) ON *ASRIGDARA*

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KEYWORDS: *Asrigdara* (DUB), *Babool Acacia Arabica* and *Kukundar, Blumea Lacera, Raktastambhana Chikitisa.*

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ABSTRACT

Rakta is known to be a vital substance of body. As the disease is characterized by excess flow of blood out of the body, *Raktastambhana Chikitisa* is beneficial. Treatment prescribed for *Raktatisara, Raktapitta, Raktarsha, Guhyaroga* and *Garbhasrava* is also useful. Considering this aspect, *Raktastambhaka, Raktsodhana, Raktapittaghna* effects are desired in treatment. Haemostatic drugs should be used by giving due consideration to the association of *Doshas* diagnosed on the basis of colour and smell of the blood. **Aims and Objectives:** To evaluate the efficacy of *Babool* and *Kukundar* and comparative clinical study of *Babool* and *Kukundar* on *Asrigdara.* **Materials and Methods:** For the present study, patients fulfilling the clinical criteria for diagnosis of *Asrigdara* will be selected irrespective of their age, sex, religion, etc, in random from O.P.D. section of M. M. M. Govt. Ayurveda College hospital, Udaipur (Raj.). Case history of all the patients was taken in the specially prepared proforma. **Conclusion:** *Babool* due to its astringent taste and *Kunkundar* due to its bitter taste, both drugs pacify excessive *Pitta* humour which is main cause of *Asrigdara*. Their chemical constituents possess haemostatic and anti-inflammatory properties thus considering these facts, these drugs have been selected for present study.

INTRODUCTION

Ayurveda is the traditional healing modality of the Vedic culture from India. Ayurvedic medicine views health as much more than the absence of disease. The benefits of Ayurvedic medicine have been proven over centuries. *Dravyaguna vigyan* is fundamental, inseparable branch of Ayurveda, which deals with study of such *Dravyas* and its properties, actions, dose, time of administration and used in various preparations of these drugs. The World Health Organization (WHO) estimates that 4 billion people, 80 percent of the world population, presently use herbal medicine for some aspect of primary health care. WHO noted that of 119 plant-derived pharmaceutical medicines, about 74 percent are used in modern medicine in ways that correlated directly with their traditional uses as plant medicines by native cultures. Hormonal therapy has many side effects in management of *Asrigdara* while these herbal drugs have no side effects. *Asrigdara* is most common gynecological disorders. *Asrigdara* or Dysfunctional uterine bleeding (DUB), regular or irregular with alterations in amount or duration of menstrual loss, commonly implies to excessive regular menstrual bleeding or essential menorrhagia. Ayurvedic classics defined *Rakta Pradara* as excessive *Pradeerana* (secretion) of *Rajah*. The *Vayu* after getting vitiated, increases quantity of *Rakta* (blood), takes *Rakta* to *Rajovaha siras* and increases the quantity of *Rajah* that comes out through *Rajovaha siras* and causes *Rakta pradara*.[1] DUB usually occurs either when girls begin to menstruate or when women approach menopause, but it can occur at any time during a woman's reproductive life. About 90% of DUB events happen when ovulation is not occurring (Anovulatory DUB). In such cases, women do not properly develop and release a mature egg. As a result, estrogen is produced continuously, causing an overgrowth of the uterus lining. The period is delayed in such cases, and

when it occurs menstruation can be very heavy and prolonged. The other 10% of DUB cases occur in women who are ovulating (Ovulatory DUB), but progesterone secretion is prolonged because estrogen levels are low. This causes irregular shedding of the uterine lining and break-through bleeding.[2]

Significance of Study

1. Mostly female suffered from DUB in reproductive age and also during Menopausal age group.
2. For knowing the effect of *Babool* and *Kukundar* on *Asrigdara*.
3. There are so many side effects by modern medicines. So herbal drugs are chosen on DUB.
4. *Babool* and *Kukundar* are haemostatic agent.
5. Hormonal therapy has many adverse effects on body. These herbal drugs are no side effects.
6. *Kukundar* has *Tikta rasa* and *Ushna virya.* So it normalizes the liver function, detoxifying body and normalize the hormone level.

AIMS AND OBJECTIVES

- To evaluate the efficacy of *Babool* and *Kukundar* on *Asrigdara.*
- For comparative clinical study of *Babool* and *Kukundar* on *Asrigdara*.

MATERIALS AND METHODS

Selection Criteria of the Patients

For the present study, patients fulfilling the clinical criteria for diagnosis of *Asrigdara* will be selected irrespective of their age, sex, religion, etc. in random from O.P.D. section of M.M.M. Govt. Ayurveda College hospital, Udaipur (Raj.). Case history of all the patients was taken in the specially prepared proforma.

Inclusion Criteria

Patients fulfilling the following general and diagnostic criteria were selected for the present study.

- Patients presenting with symptoms of *Asrigdara*.
- Patient having age 14 – 50 yr.
- Any type of bleeding through vagina.

Exclusion Criteria

- Patient suffering from Pelvic pathological conditions like as– Tumours, Endometriosis, Fibriod, Cysts and Carcinoma.
- Pregnant female with menorrhagia.

Investigations Done for the Study

Routine haematological investigation such as Hb%, ESR, BT, CT were carried out before and after the treatment. They were also subjected for USG wherever required.

Treatment Groups

- Group A: In this group, patients were administered *Babool twak Churna (BT Churna)* in the dose of 3 gm twice a day for 2 months with luke warm water.
- Group B: In this group, patients were administered *Kukundar panchang Churna (KP Churna)* in the dose of 3 gm twice a day for 2 months with honey.
- Group C: In this group, patients were administered Mixed *Churna (BK Churna)* in the dose of 3 gm twice a day for 2 months with honey.

Criteria of Assessment

- Most of the symptoms and signs of *Asrigdara*, described in Ayurveda, are subjective in nature and to give results objectively and for statistical analysis, multi dimensional scoring system was adopted. This score was obtained before and after the treatment through statistical analysis and percentage relief was taken to assess the efficacy of treatment.
- Score was given according to the severity of symptoms as– Absence of symptoms= 0, Mild degree= 1, Moderate degree= 2 and Severe degree= 3.
- Details of scores adopted of the main sign and symptoms in present study were as follows.

Grade	Length of cycle	Quantity of bleeding	Interval of bleeding	Painful menses	B.T.	A.T.
0	3-5 days bleeding	2 – 3 pads wet per day	24 – 28 days	No complain of pain during menses		
1	6-7 days bleeding	3 pads wet and poured per day	20 – 24 days	Complain of pain during menses		
2	8-9 days bleeding	4 pads wet and poured per day	15 – 20 days	Take medicine for relief of pain during menses		
3	>9 days bleeding	> 4 pads wet and poured per day	> 15 days	After taken medicine pain during menses persist		

OBSERVATION AND RESULTS

In the present study, 10-10 patients were registered in every group but 3 patients could not complete the trial. Hence the demographic data is presented according to 30 cases but the clinical data is presented according to 27 cases (i.e. 8 in group I, 10 in group II and 9 in group III).

Effect of the Trial Drug on Profile of Patients

Table 1: Statistical Analysis of Effect of Therapy in Group I

S.No.	Menstrual bleeding	Mean score		% relief		SD ±	SE±	't'	P
		BT	AT	Diff.	%				
1.	Duration	8.90	5.50	3.40	38.20%	1.93	0.68	4.99	<0.001
2.	Amount	4.00	1.88	2.13	53.13%	1.28	0.45	4.69	<0.001
3.	Interval	1.80	0.88	0.93	51.39%	0.83	0.30	3.14	0.003
4.	Pain	1.80	0.75	1.05	58.33%	0.89	0.31	3.35	0.02

Table 2: Statistical Analysis of Effect of Therapy in Group II

S. No.	Menstrual bleeding	Mean score		Relief		S.D. ±	S.E. ±	Paired 't' test	P
		B.T	A.T	Diff.	%				
1	Duration	11.70	5.80	5.90	50.43%	4.07	1.29	4.59	<0.001
2	Amount	3.30	1.10	2.20	66.67%	1.40	0.44	4.97	<0.001
3	Interval	2.30	0.30	2.00	86.96%	1.15	0.37	5.48	<0.001
4	Pain	2.30	0.40	1.90	82.61%	0.99	0.31	6.04	<0.001

Table 3: Statistical Analysis of Effect of Therapy in Group III

S. No.	Menstrual bleeding	Mean score		Relief		S.D. ±	S.E. ±	Paired 't' test	P
		B.T	A.T	Diff.	%				
1	Duration	8.30	5.22	3.08	37.08%	2.07	0.65	4.71	<0.001
2	Amount	4.10	2.33	1.77	43.09%	1.59	0.50	3.51	0.02
3	Interval	1.30	0.56	0.74	57.26%	0.71	0.22	3.33	0.01
4	Pain	1.80	0.78	1.02	56.79%	1.12	0.35	2.89	0.01

Table 4: Statistical Analysis of Effect of Therapy in all group

S.No.	Menstrual Bleeding	Gr. I		Gr. II		Gr. III	
		Mean	SD	Mean	SD	Mean	SD
1	Duration	3.40	0.12	5.90	0.23	3.08	0.17
2	Amount	2.13	0.18	2.20	0.37	1.77	0.38
3	Interval	0.93	0.42	2.00	0.42	0.74	0.35
4	Pain	1.05	0.50	1.90	0.33	1.02	1.12

Table 5: Intergroup Comparison over Criteria of Assessment

S.No.	Menstrual Bleeding	Gr. I/ II		Gr. I/ III		Gr. II/ III		ANOVA p value
		T value	P value	T value	P value	T value	P value	
1	Duration	29.69	<0.001	4.52	<0.001	30.59	<0.001	<0.001
2	Amount	0.53	0.60	2.54	0.02	2.49	0.02	0.02
3	Interval	5.37	<0.001	1.01	0.33	7.13	<0.001	<0.001
4	Pain	4.14	<0.001	0.07	0.94	2.27	0.03	0.02

Table 6: Overall Effect in Groups in 27 Patients

Assessment	Group I		Group II		Group III		Total	
	No.	%	No.	%	No.	%	No.	%
Cured	1	11.11%	5	50%	3	33.33%	9	33.33%
Markedly Improved	2	22.22%	4	40%	3	33.33%	9	33.33%
Partially Improved	4	44.44%	1	10%	2	22.22%	7	25.93%
Unchanged	1	11.11%	0	0%	1	11.11%	2	7.41%

DISCUSSION

In the present study the highest percentage of patients were found in the age group 31- 50 years. But sample size is small; hence no definite conclusion can be made out. A higher incidence of *Asrigdara* was seen in married woman (73.33%) most of them being multiparous (56.67%). Some married women had psychological and economical stress, sexual activeness and family disturbances after marriage also may lead to *'Asrigdara'*. Multiparous condition may be a cause of this disease because of more surface area of uterus and congestion the uterus, which causes excessive uterine bleeding due to increased vascularity. The more number of patients had *Vata pittaj Prakriti* (53.33%) and *Pitta kaphaja Prakriti* (23.33%). From the present study trial we can conclude *Pitta Dosha* is the main *Dosha* responsible for *Asrigdara* as more number of patients. The duration of illness varied from months to years. *Vishamagni* symptom was seen in maximum chronic patient (70%). Maximum number of patients (56.67%) having *Samyak* followed by (43.33%) *Asamyak Nidra*. During menstruation patients had disturbed sleep (*Asamyak nidra*) due to excessive flow of blood P/V causing stress to the patients. Majority of the women were from middle (36.67%) and lower class (23.33%) families and living with hygienic mode of life (63.33%). Majority of women were educated and their psychological status was found agitated (53.33%). Majority of the cases (56.67%) were having brisk red bleeding with unclotted blood. Some cases (46.67%) had white discharge per vaginum, though it was diagnosed occasionally during examination. Majority of the cases had mild to severe pain (90%) during menstruation. In general examination (Pulse, blood pressure, temperature, respiratory rate) and systemic examination there were no significant pathological findings.

According to observation there was mild improvement in anemia. Effect on Haemoglobin was due to decrease in excessive blood loss. It had not shown significant change on the bleeding time, clotting time and ESR.

Effect of therapies was assessed in the patients on the basis of changes observed in the features on assessment criteria and statistical analysis was done:

1. **Duration of bleeding:** Group I has shown 38.20% relief, while in Group II has 50.43% relief and Group III has 37.08**%.** All are highly significant (P < 0.001).
2. **Amount of bleeding:** Group I has shown 53.13% relief, while in Group II has 66.67% relief and Group III has 43.09%. Grp I and II are highly significant (P<0.001) while Grp III are significant (P = 0.02).
3. **Interval of bleeding:** Group I has shown 0.93% relief, while in Group II has 86.96% relief and Group III has 57.26%. Grp II and III are highly significant (P<0.001) while Grp I and III are significant (P = 0.003 and P = 0.01).
4. **Menstrual pain:** Group I has shown 1.05% relief, while in Group II has 0.93% relief and Group III has 56.79%. All are significant (P = 0.02, P = 0.003 and P = 0.01).

The fundamentals of Ayurvedic pharmacology are capable to give a better scientific lead in mode of the drug action. Pharmacology of Ayurveda is based on the theory of *Rasa, Guna, Virya, Vipaka* and *Prabhava* which were the simplest parameters in those days to ascertain the action of the drug. *Samprapti vighatana* is said to be the treatment. Therefore, the action of a drug means to dismantle the *Samprapti Ghatakas* of the disease. Hence to explain the mode of action of a drug means to establish a relationship between the *Samprapti Ghatakas* of the disease and pent fold principles of *Rasa, Guna, Veerya, Vipaka* and *Prabhava* of a drug.

Acharya Charaka explains drug action as- Certain drugs act through *Rasa*; some through *Veerya*, some through their *Gunas*, some through their *Vipaka* and some through their *Prabhava.*[3] In this clinical study we are studying the result of drug *Babool* and *Kukundar* on *Asrigdara*. Based on these results and *Charakas* general principle the probable mode of action of *Babool* and *Kukundar* in the disease *Asrigdara* is being discussed here:

Mode of action of *Babool* in *Asrigdara*

Babool possesses *Kashaya rasa* and *Sheet Veerya.*[4] Tannic acid which is main chemical constituent of *Babool*, is astringent as well as haemostatic in nature. Predominance of *Kashaya rasa* results in constriction of micro channels and vessels. Thus stop bleeding and reduce swelling.

As per modern concept, the derangement of blood is mainly related to its clotting or bleeding values. Increase in bleeding time is mainly related to the *Ushna guna* of *Pitta*. Its astringent taste and cooling property soothes the irritable nature of excess *Pitta* in the blood thus reduces inflammation. Probable role of this compound is vasoconstriction and haemostatic action. This may be due to Phenol hydroxyl groups of Tannins which are capable of reacting strong hydrogen bonds with atoms of the

peptide binding protein thus inhibiting thrombin for example, a proteolysis enzyme that converts fibrinogen a soluble molecule in a molecule insoluble fibrin.

Mode of action of *Kukundar* in *Asrigdara*

Acharya Charaka primarily indicated the use of *Tikta rasa* for *Agni deepana, Rakta skandana karma* and more specifically for *Dosha pachana.*[5] The treatment principle of *Asrigdara* is *Ama harana* of *Pitta, Tikta rasa* considered best to pacify excessive *Aama*. Thus Herbs having bitter taste eg (*Kukundara*) are usually indicated in *Asrigdara.*[6] Despite that *Tikta rasa* also ignite the fire (*Agni deepana karma*) (primarily *Dhatwagni*) thus ultimately resulted in *Rakta Skandana* by these two phenomenon.

Active constituents of *Blumea lacera* are Isoflavonoids such as Ferinone, Comferyl, hentriacontane, hentriacontanol promotes capillary spasm (Vasoconstriction) and prompt clot formation resulting in ceasation of bleeding. In addition anti-inflammatory action also promotes resolution of inflammation.[7]

Vitamin C component of *Blumea lacera* regulate blood clotting mechanism by maintaining of prothrombin, thrombin and thrombokinase concentrations, thus reduced the clotting time upto normal range.

It is important to emphasize here that addition of mineral elements as Ca, Fe, S, K, P, Mg, Mn. Ca is required for the activation of factors like 2, 7, 9, 10. Ca required cofactors for prothrombin activation enzyme complexes to functions. Ca converts prothrombin to thrombin. Calcium mediates the binding of tenase enzyme complexes to the phospholipid surfaces expressed by platelets, which in turn activates prothrombin to produce thrombin which produces fibrin to fibrinogen. Despite Ca, other minerals (Fe, S, K, P, Mg, Mn) plays an important role in blood coagulation.

CONCLUSION

Rakt Pradar/Asrigdara is a disease of menstrual cycle which is characterized by excessive and/or prolonged bleeding per vaginum during menses or even in between the menses and different from the feature of normal menstrual blood. *Asrigdara* is a disease caused by vitiation of all the three *Doshas,* with a clear predominance of *Pitta*. *Asrigdara* has very close resemblance with Dysfunctional uterine bleeding (DUB) for which no organic or pelvic pathology can be found out, Etiology of the disease is mainly hormonal. The main principle of the management of *Asrigdara* is same as *Raktapitta* as *Raktastambhana*, *Rakta-sodhana* and *Vatanulomana.*[8] *Dipaniya* and *Pachaniya* drugs are essential in the treatment of *Asrigdara* for proper *Agni* and which helps in proper metabolism. *Babool* due to its astringent taste and *Kunkundar* due to its bitter taste, both drugs pacify excessive *Pitta* humour which is main cause of *Asrigdara*. Their chemical constituents possess haemostatic and anti-inflammatory properties thus considering these facts this drugs have been selected for present study.

REFERENCES

1. Kashinath dwevedi, Charaka Samhita, Chikitsa sthana, 30/209, Chaukhambha Sanskrit Samsthana, Varanasi. pp. 777.
2. D.C. Dutta., Text book of Gynaecology, New central book agency, 2008, pp.183.
3. Kashinath dwevedi, Charaka Samhita, Sutra sthana, 26/71, Chaukhambha Sanskrit Samsthana, Varanasi, 2017. pp.356.
4. Priyavrit Sharma, Priya Nighantu**,** Haritakyadi varga**,** Chaukhamba surbharti prakashan, Varanasi, 1983, pp.31.
5. Kashinath dwevedi, Charaka Samhita, Sutra sthana, 26/5, Chaukhambha Sanskrit Samsthana Varanasi, 2017, pp.506.
6. Priyavrit Sharma, dravyaguna vijnana, part-2nd, Chaukhamba bharti academy, Varanasi, 2010, pp.794-95.
7. The wealth of India, vol.IInd, NISCAIR Press, New delhi, 1988, pp.166-67.
8. Kashinath dwevedi, Charaka Samhita, Chikitsa sthana, 30/227-28, Chaukhambha Sanskrit Samsthana Varanasi, 2014, pp.1047.

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