

Role of *Sphatik bhasma* as haemostatic drug in the Management of *Rakta Pradar* W.R.T Heavy Menstrual Bleeding

Research Article

Deepali Agrawal^{1*}, Rajshree Ambhore²

1. Associate Professor, 2. Assistant Professor, Department of Rognidan and Vikruti Vigyan, SSVP Ayurved College, Hospital and Research Institute, Hatta, Dist. Hingoli. India.

Abstract

Heavy menstrual bleeding or abnormal bleeding is most common problems in females in present era due to improper diet habits, sleeping habits due to increasing degrees of civilisation. There are various treatment on heavy menstrual flow like hormonal replacement therapy where there is hormonal imbalance, Anti fibrinolytics drugs in dysfunctional uterine bleeding available today. According to Ayurveda it can be correlated with *Raktapradar*. Various drugs are suggested in *raktapradar* in classical text. In this study efficacy of *Sphatik bhasma* (*potassium aluminium sulphate* also known as *potassium alum* or *potash alum*, has a molecular formulae of $K_2(SO_4).Al_2(SO_4)_3.24H_2O$) as haemostatic drug is observed through clinical trial. The clinical study was conducted on 15 patients having heavy menstrual bleeding. Interventional drug *Sphatik Bhasma* with *pakwa kadali phala* (banana or *Musa paradisiaca*) is administered for 3 days. The clinical assessment was done on the basis of grading criteria of *Rakta Pradar* like amount and duration of bleeding, pain, burning sensation and weakness and were assessed on mean scores before and after treatment and analysed. The results were statistically and clinically highly significant in *Raktapradar*.

Key Words: *Raktapradar*, *Sphatik bhasma*, Heavy menstrual bleeding.

Introduction

Menstruation is a special physiological phenomenon of female reproductive period. In menstrual cycle a rhythmic hormonal change takes place due to which a series of events occurs in systemic manner. Menstrual bleeding means shedding of endometrium occurs which causes per vaginal bleeding. (Normally it ends up to 5 days if it extends more than 5 days then it is called abnormal. According to modern science bleeding extends more than 80 ml it is called heavy menstrual bleeding. All types of abnormal menstrual bleeding is called *raktapradar*) (1). "Various reports suggest that 30 to 50% of the women in the reproductive age group suffer from excessive and irregular uterine bleeding due to various causative factors. 8% of the female population consider their menstruation excessive. Menstrual irregularity may lead problems in conception and affects fertility of women. (3)

According to modern science, the abnormal bleeding is due to some disturbance in endometrial blood vessels and capillaries these are probably related with alteration in the ratio of endometrial

prostaglandins. This may be due to disturbance of hypothalamic pituitary axis.(4)

The line of treatment mentioned in *raktapradar* is as per *raktatisar*, *raktapitta*, *raktarsha*.(5) use of such preparations have been explained in classical text for the treatment of *raktapradar*. The drugs used for *raktapradar* are *grahi*, *stambhak* property. In past days *Sphatik* was used to stop bleeding externally as *Shodhit*(purified) *sphatik bhasma* can be used internally. *Sphatik* is easily available, Effective and with minimal side effects. Due to limitation of medical and surgical therapy for excessive uterine bleeding it becomes need of time to find out an effective, harmless therapy with the help of Ayurveda. Thus use of *sphatik bhasma* as haemostatic drug is selected to conduct the study on most prevalent disorder in present situation called *Rakta pradar* or *Asrigdar*.

Aims and Objectives

- To determine the *stambhan* (haemostatic) property of *sphatik bhasma* in *Rakta pradara* w.r.t. heavy menstrual bleeding.
- To provide a simple, safe, and non-hormonal treatment for the patients of *raktapradar*.

Materials and methods

Total 15 patients were randomly selected from OPD and IPD of SSVP Ayurveda College, Hatta irrespective of caste and religion on the basis of inclusive and exclusive criteria after taking written informed consent. Ethical clearance was obtained from the institutional ethical committee.

* Corresponding Author:

Deepali Agrawal

Associate Professor,
Department of Rognidan and Vikruti Vigyan,
SSVP Ayurved College, Hospital and Research
Institute, Hatta, Dist. Hingoli. India.
Email Id: dr.deepaliagrwal2006@gmail.com

Criteria for inclusion of the patients

- Age between Menarche and Menopause (12-50 years.)
- Excessive bleeding during menstruation (change of more than 3 soiled pads/day)
- Prolonged Menstrual bleeding (more than 7 days)
- Intermenstrual bleeding.

Criteria for exclusion of the patients

- Intrauterine growth such as Myomas, endometrial polyp etc.
- Cancer of cervix and or uterus.
- Any other systemic disorders which influences menstrual cycle.
- Case undergoing treatment for any other serious illness.

Investigations:

- Blood: Hb%, TLC, DLC, ESR, BT CT
- USG: To rule out uterine pathology

Table No 1: showing interventional drug details

Sr no.	Drugs	Dose, Anupan, Aushadh sevan kala	Duration
1	Shuddha Sphatik Bhasma (Kankshi i.e. alum purified by bharjan on iron pan and made fine powder using khalwayantra.)	Dose: 125 mg of sphatik bhasma 3 days Anupan Ripened kadali phala ⁶ Aushadh sevan kala Apankala	3 to 5 consecutive bleeding days of menstrual cycle until the bleeding stops.

Clinical Assessment

Subjective Assessment

The patients undergone treatment were assessed for efficacy of *Sphatik bhasma* as a haemostatic action on basis of grading criteria (table No.2) for improvement in specific.

Symptomatology like bleeding and pain.

Table No 2: Subjective assessment criteria gradations

Sr. no.	Bleeding Amount No. of pads/ day	Abdominal pain / Back ache	Burning Sensation (Daha)	Grade
1	1-2 pads/day	No pain	No burning	0
2	3-4 pads/day	Mild pain	Occasional burning	1
3	5-6 pads/day	Moderate pain	Often mild burning	2
4	7 and above pads/day	Severe pain	Severe burning	3

Trial study

In this study total 15 patients are selected and were assessed before and after treatment. The notable changes are recorded after treatment. Laboratory investigations were carried out before and after commencement of trial for the purpose of inclusive criteria.

Results

The results were assessed before and after treatment according to positive changes in the subjective symptoms. Further statistical analysis was done by applying student "t test" and p value is calculated by referring the Fishers table at the corresponding level of degree of freedom.

Observations and Results

Table No. 3 observation and results before and After Treatment

Symptoms	Mean		Diff	SD	SE	t	P	Results
	BT	AT						
Amount of bleeding (No of pads)	1.80	0.27	1.93	0.68	0.13	14.17	P<0.0001	Highly significant
Pain in Abdomen	1.733	0.266	1.46	0.51	0.133	17.82	P < 0.05	Significant
Burning sensation	1.933	0.466	1.33	0.975	0.25	10.23	P<0.05	significant

Discussion

Heavy menstrual bleeding referred as menstrual period with abnormal heavy bleeding (>80 ml) blood loss in one cycle. According to *charka*, per vaginal bleeding normally for 5 days. In *raktapradar* there is heavy and excessive bleeding. So *raktapradar* can be correlated with heavy menstrual bleeding. *Samprapti ghatak of Rakta Pradar* is vitiated *Rakta and pittavruta vata and apan dusti*.(6)

Probable drug of action of sphatika on raktastambhan

Sphatika has *Kashaya, laghu, and ruksha* properties. Due to *kashaya rasa* and *ruksha* it act as *grahidravaya*. As it is indicated in all types of bleeding as a haemostatic drug.⁷In *raktapradar chala guna* of *vata, sara and drava guna* of *pitta dosha* are vitiated which increases amount of blood. Hence *sphatik* might affect the *dravaguna* of *pitta dosha* with the help of *ruksha, laghu, and kashaya rasa*. Thus the *shuddha Sphatik bhasma* may act as haemostatic in *Raktapradar*.

Probable action of *kadali phala* on *Raktapradar*

Pakva kadali phala has *guru, sheet, madhur vipaka* which are opposite to the properties of *pitta and raktadosha*. It is indicated in *raktapitta*.⁸so, *sphatik bhasma* along with *kadali phala* enhance the properties of *sphatik bhasma*. So, it is used as *anupana* in this study. Excessive bleeding through vagina occurs due to vitiated *apanvayu* so in this study the drug is given at *Apankala*.

Observations in this study

On per vaginal bleeding

In this study 64% patients are unmarried. They were doing higher studies. Improper diet, consumption of junk food, irregular sleeping habits, may lead to *aam Utpatti* which leads to improper *dhatu poshan*. Further *Upadhātu* of *rasa* will get affected. In this group administration of *sphatik bhasma* in heavy menstrual bleeding gave significant result. Only one patient having age 26 years showing PCOD in USG and having increased level of AMH got relief from heavy menstruation after taking *sphatik bhasma* but the bleeding started again after 8 days. Long term administration of *sphatik bhasma* may give significant result.

In this study 24% patients having age between 30 to 40 years. Out of them 2 patients have history of IUD insertion before 18 to 20 months given treatment and suggested to remove IUD which causes heavy menstrual bleeding. In these cases also *sphatik bhasma* is very helpful as haemostatic drug.

In this study 12% cases having age group above 40 In this study 12% cases having age group above 40 years. Complaining irregular menses with menorrhagia gives more than 75% relief.

Effect on abdominal pain

Interventional drug shows more significance on reducing abdominal pain.

Effect on burning sensation

After 3 days of internal administration of drug, burning sensation was totally resolved. It may due to *tikta, kashaya, and ruksha* property of *sphatik bhasma* and showed significant effect on burning sensation associated with *Raktapradar*.

Conclusion

Considering the side effects and adverse effects of hormonal therapy, Ayurveda management mentioned above can be recommended as it is safe, feasible, cost-effective and easily available drug for the management of heavy menstrual bleeding. Further research should be carried out on large patient to prove haemostatic property of *sphatik bhasma*.

References

1. A case study of *Raktapradar* in International ayurvedic medical journal (ISSN:2320 5091) (February-March, 2017)1(3)
2. www.easyayurveda.com (plantain)
3. Edlund M, Magunusson c, Von Schoultz B Quality of life a Swedish survey of 2200 w in :Smith S,k,ed, Dysfunctional uterine bleeding.Lomdon : Royal Society of Medicine Press, 19994: p36-37
4. Amrita Mishra and Dr.Rajashree Shelare An ayurvedic and contemporary overview of heavy menstrual bleeding: A conceptual approach International Journal of Clinical Obstetrics and Gynaecology 2019; 3(5): 237-242h
5. Yadavji T. editor, CharakaSamhita of Agnivesha, Chikitsasthana, chapter 30 ver.225. 2nd edition, Varanasi : ChaukhambaSurbharatiPrakashan 2017, Pg 228
6. Nomina V Adwani, A Study on Ayurveda Poly Herbal Compound of Yogaratnakar (17 - A.D.) w.s.r. Rakta-Pradara (Abnormal Uterine Bleeding) international journal of ayurvedic medicine, 2012, 3(4), 222-23
7. Santosh Khandal, Rasa Bhaishajya Kalpanavijnana, Rasadravya Vargikaranaadhyaya, Varanasi: Chaukhamba Publication 2013, Pg 199
8. Priyavrata Sharma. Editor, Kaiyadev-Nighantuh, Aushadhi vargaadhyaya, Varanasi, Chaukhamba Bharati Academy, 2015, Pg 55-56.
9. Priyavrata Sharma. Editor, Kaiyadev-Nighantuh, Aushadhi vargaadhyaya, Varanasi, Chaukhamba Bharati Academy, 2015, Pg 55-56.
