

## REVIEW RESEARCH ARTICLE ON RAKTAPRADAR

Dr. Meha<sup>1\*</sup>, Dr. P. C. Mangal<sup>2</sup>

<sup>1</sup>MD Scholar, PG Department of Kriya Sharir, Institute for Ayurved Studies and Research, Kurukshetra, Haryana.

<sup>2</sup>Professor and H.O.D., PG Department of Kriya Sharir, Institute for Ayurved Studies and Research, Kurukshetra, Haryana.

Article Received on  
26 March 2024,

Revised on 16 April 2024,  
Accepted on 06 May 2024

DOI: 10.20959/wjpr202410-32229



\*Corresponding Author

Dr. Meha

MD Scholar, PG  
Department of Kriya Sharir,  
Institute for Ayurved  
Studies and Research,  
Kurukshetra, Haryana.

## ABSTRACT

A comprehensive study was conducted regarding the research done on drugs and their formulations used in case of *Asrigdar/Rakta Pradar* (Dysfunctional Uterine bleeding). Various research works and clinical studies were done in the past on *Asrigdar* and it was seen that *ayurvedic* medicine are very much effective in curing the disease. The drugs included in this article are- *Nagkeshar, Lodhra, Udumbara, Indrayava, Shalmali, Madhuka, Ashoka, Sariva, Bhumyamalaki, Daruharidra, Durva*. Other useful drugs mentioned in text are: *Tandulodaka, Sharkara, Madhu, Kanchnar, Amalaki, Shatpushpa, Jeeraka, Rasona, Bola, Badar, Amra, Babool, Parnabeeja, Palaksh, Kadli, Kusha, Kasha, Darbha, Japa, Pisachkarpasi, Ikshvaku, Ajaparna, Kakodumbar, Akshot, Hapusa, Sudarshan, Rakta Niriyasa, Bhangra*, etc.<sup>[1,2]</sup> Their mode of action is studied in this article by considering the pharmacology and results of previous research. It was

done to check how much the selected drugs were effective and safe as per treatment criteria of a specific disease.

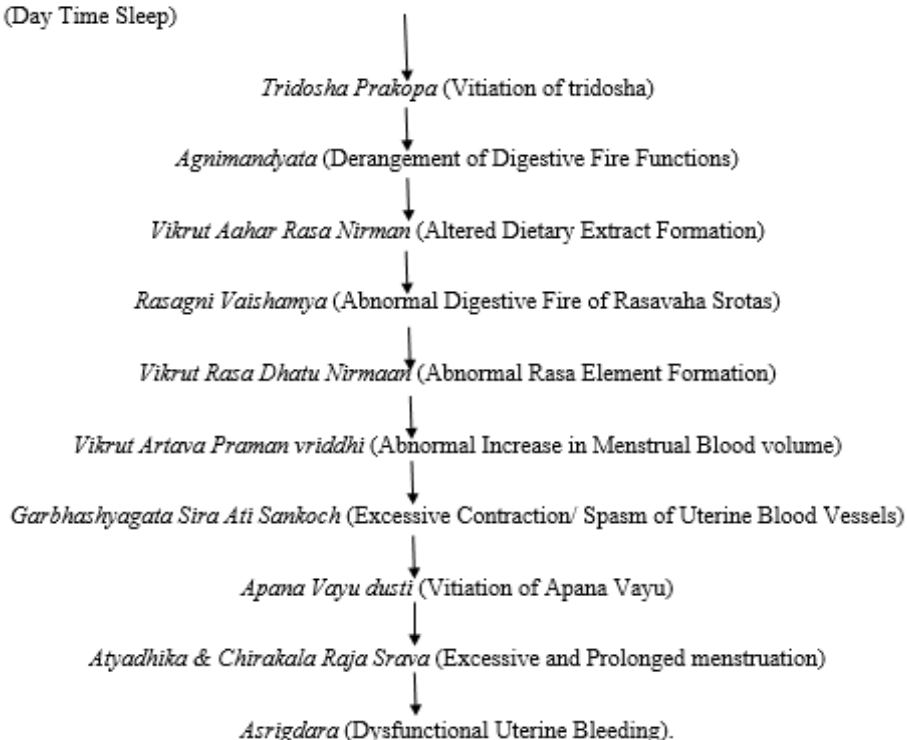
## INTRODUCTION

*Raktapradar* or *asrigdara* means a disease with excessive bleeding per vaginum during menstrual period or in between the cycle. Its description is available in various veda and puranas. It is mentioned in *RaktaPradoshaj Vikara* and the vikaras due to *Pittaavrit Apana Vayu* by *Aacharya Charak*<sup>[3]</sup> while *Aacharya Sushrut* has mentioned it as *RaktaPradoshaj*

*Vikara* and *vikara* due to *Pitta Samyukta Apana Vayu*.<sup>[4]</sup> It is explained as *Raktayoni* by *Ashtang Sangrah*, with synonyms *asrigdara* or *pradar*.<sup>[5]</sup>

The term “*Asrig*” means Menstrual Blood and “*dara*” means excessive excretion which combinely means “*Asrigdara*” i.e., excessive excretion/ flow of menstrual blood.<sup>[6]</sup> The *samprapti*<sup>[7,8]</sup> is as follows:

*Viruddh Bhojan* (Unwholesome diet) , *Maadyadi* (Alcohol) *Amla, Katu, Vidahi Aahar Sewan* (Sour, Bitter, Spicy Diet Intake), *Ajirna* (Indigestion), *Garbhapaat* (Abortion), *Ativyavaya* (Excessive sexual activity), *Atyadhika Margagaman* (Excessive Walking), *Shoka* (Grief), *Abhigata* (Trauma- Physical/ Mental), *AtiYana Sewan* (Excessive Travelling), *DivaSwapan* (Day Time Sleep)



### (ASRIGDARA SAMPRAPTI)

Its 4 types are mentioned in texts based on the character of the blood flow and its associated features.

*Charaka*<sup>[9]</sup> and *Vagabhatta*<sup>[10]</sup> has said to treat it on the lines of *Raktatisara* (Malena/Dysentry), *Raktarsha* (Haemorrhoids), *guhyaaroga* (STDs) and *garbhapata* (Abortion). *Sushruta* has told to access *tridosha* status before initiating drug or surgical procedure and do treat on the line of *Raktapitta*.<sup>[11]</sup>

It can be correlated with dysfunctional uterine bleeding because of abnormal bleeding from uterine endometrium irrespective of any structural abnormality in pelvis or any endocrinal disorder or general disease.

The treatment is divided into two parts based on *bahya* (External Treatment) or *abhyantara chikitsa* (Internal Treatment).

*Bahya Chikitsa* (External Treatment) includes tying *vyaghranakhi mula* in *kati pradesh* (at Waist line) uprooted in *uttarphalguni nakshatra* while situated *uttarmukhi*.

### ***Abhyantara chikitsa* (Internal Treatment) includes**

- i) *Sanshodhan* (Purification & Elimination of increased Doshas)- *Virechana Karma* (Purgative action) with *Mahatikta Ghrita*, *Nasya* (Oil instillation in nostrils) & *Abhyanga* (Massage) of *Shatpushpa Taila*, *Chandanadi Niruh Basti* (Decoction Enema), *Rasanadi Niruha Basti*, *Kushadi Asthapana*, *Lodhradi Asthapana*, *Mustadi Yapana Basti*, *Madhukadi Taila Anuvasan Basti* (oil Enema), *Shatpushpa Taila Anuvasan Basti*.
- ii) *Shanshaman* (Pacification of Increased Doshas)- intake of drugs like *Darvyadi Kwath* (Decoction), *Tandulodaka* (Rice Water), *Ashoka Valkal Ksheera paka* (Medicine Flavoured Milk), *Kushmand khand* (Granular preparation of drug), *Jeerakavleha* (Semisolid drug flavoured *Chyawanprash* like paste), *Phala ghris* (Ghee), *Shita Kalyanak Ghrit*, *Shalmali Ghrita*, *Shatavari Taila*, *Shatpushpa Taila*, *Bola Parpati* (formed by *Agni Sanskar* of *Rasa-Hg* Preparations), *Pradar ripu Ras* (*Hg* Preparation), *Gokshuradi Guggulu* (*Guggulu* coated drug flavored tablet preparation), *Chandraprabha Gutika*, *Lasuna Kalpa*, *Shatpushpa Kalpa*, *Shatavari Kalpa*, etc.<sup>[12]</sup>

### **Relevant Research done on drugs used in *Asrigdara***

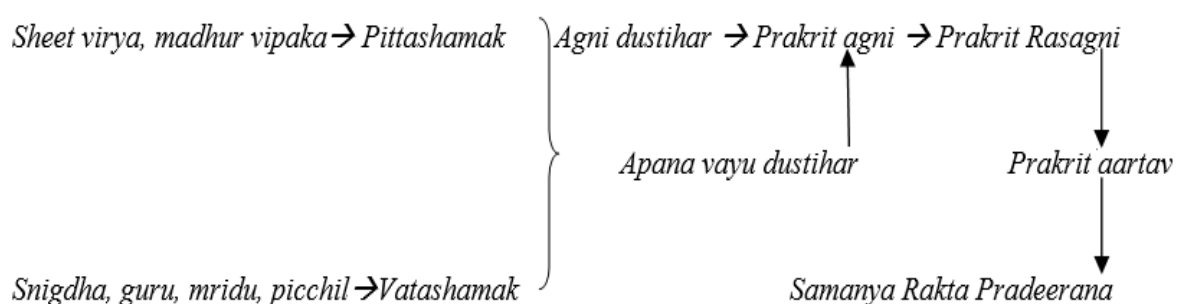
#### **❖ *Nagkeshar* (*Mesua ferra* Linn.: Guttiferae family)**

*Staph. Aureus*, *Esch. Coli*, *Eberthella typhosa*, *Vibrio cholera*, *B. Friedlanderi*, *Mycobacterium phlei* inhibitory effect was found due to its active principles *Mesulol* and *Mesulone*. These active principles were found to be most effective against *Staph. aureus*. (Chakraborty et al. 1959)<sup>[13]</sup>

Its chemical constituents -*mesuliferon*, *mammeisin*, *mesulamic acid*,  $\beta$ -sitosterol, a triterpenoid (*guttiferol*) shows astringent (*kashaya rasa*), haemostatic (*raktastambhan*) and antibacterial (*visham jeevanu nashak*) action (*karma*), while *mesulagin*, essential oils, fatty acids (*palmitic*, *stearic*, *linoleic* and *oleic acids*) shows antibiotic action.<sup>[14]</sup>

❖ **Shalmali** (*Bombax ceiba* Linn.: Bombacaceae family)

*Shalmali* as *ghrita* formulation has *madhura* (sweet), *tikta*(bitter) *rasa* (taste); *sheeta virya* (cold potency); *madhura vipaka* (sweet end product of digestion); *snigdha* (unctuous), *guru* (heavy), *mridu* (soft), *pichhil* (slimy) *guna* (properties); *raktastambhan* (haemostatic), *dahaprashaman* (relieves burning sensation), *anuloman* (normalizes the direction of flow), *grahi* (absorbs water element), *deepana* (carminative), *balya* (strengthening), *medhya* (increases intellectual power), *agnivardhak* (increases digestive fire at different levels in body), *ayu-bala vardhak* (increases life & strength), *dhatu-ojo vardhak* (improves elemental status of body & immunity), *rasayan* (rejuvenation) *prabhav* (effect).



**(MODE OF ACTION OF SHALMALI)**

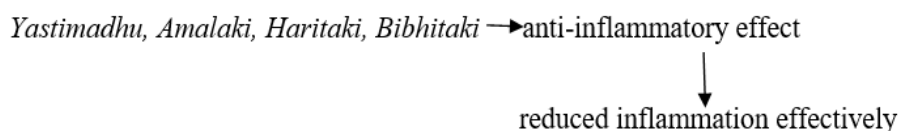
According to research, *Shalmali Ghrit* is more effective in *Adhodara Shool* (Lower Abdominal Pain) and *Rakta Kshaya Janya Daurbalya* (Weakness due to blood Loss).<sup>[15]</sup>

Vegetable preparation of *shalmali* flowers cooked with ghee and rock salt checks bleeding.<sup>[16]</sup>

❖ **Yastimadhu** (*Glycyrrhiza glabra* Linn.: Fabaceae family)

Drug appeared to possess a more potent anti-exudative activity in comparison to oxyphenbutazone. (Saxena et al. 1970)<sup>[17]</sup>

*Madhukadi gutika* – have anti-estrogenic, anti-inflammatory, bleeding time and clotting time modulating effects with more anti-spasmodiac action. (Neha R. Pandya et al.)<sup>[18]</sup>



*Alum, Lodhra* → effectively reduced BT, CT

*Deepaniya, Pachaniya, yakrit uttejaka* action → reduced uterus weight upto an extent.

Little effect also seen on contractile activity.

*Yastimadhu churna* mixed with sugar and rice water is said to be beneficial in *raktapradar*.<sup>[19]</sup>

❖ **Ashoka** (*Saraca asoca* Roxb.- Caesalpiniaceae family)

It stimulates uterus making more frequent and prolonged contractions (Doesn't make tonic contractions like ergot or pituitary). On the basis of this, it is considered that it will prove useful in all the cases of uterine haemorrhage where ergot is indicated, viz., metrorrhagia, menorrhagia, post-partum haemorrhage, etc. (B.N. Ghosh, PMMT).

Good oxytocic activity of alcoholic extract was seen as its uterine response was found to be conditioned by hormonal environment and stage of gestation. Also extract had spasmodic action on rabbits intestine and cardiogenic action in frog and dog. (PID)<sup>[20]</sup>

Observation and effects of *Ashoka twak churna* in *raktapradar*-<sup>[21]</sup>

- a) P/V Bleeding- maximum *rakta stambhak* (Hemostatic) effect was seen.
- b) Lower Abdominal Pain- Good relief as pain reduced with controlled bleeding.
- c) Pallor- relieved in majority because of controlled amount of blood flow.
- d) Generalized Body ache- not fully resolved but the intensity was reduced.
- e) Backache, Giddiness, Anorexia- maximum result was observed.
- f) Vomiting- 100% relief was seen.

Intake of *Ashoka* bark boiled in milk relieves *raktapradar*.<sup>[22]</sup>

❖ **Lodhra** (*Symplocos Racemosa*- Symplocaceae family)

*Lodhra churna*- it acts on pitta due to its pharmacological action and rasapanchak and brings pitta to normal, then acts on ama (Undigested State) and breaks the Samprapti (Pathogenesis) of *raktapradar*.<sup>[23]</sup>

### Mode of Action

Increases serum FSH, LH levels → Restores fertility in women who fails to conceive.

(Hence is a drug of choice in all gynecological disorders.)

Great oestrogenic potentiality as uterine tonics because of its biologically active chemicals

In Bark → 2 alkaloids (loturine & calloturine), monomethyl pelargonidin glucoside of 7-O-methyl leucopelargonidin.

In Plant → pelargonidin-3-O-glucoside, betulinic, acetyloleanolic acid, leanolic acid & ellagic acid.

❖ **Sariva** (*Hemidesmus indicus* Linn.- Asclepiadaceae Family)

*Sarivadi vati*-have anti estrogenic, anti inflammatory, bleeding & clotting time modulating effects with more spasmodiac/ oxytotic effect.<sup>[24]</sup>

It contains- *Sariva*, *Shatavari moola*, *Prishniparni moola*, *Shalaparni moola*, *Daruharidra*, *Palash twak*, *Ashok twak*, *Nagakeshar*. The drug formulation have major effect-

- (i) In reducing absolute weight of uterus by *Deepaniya* (Carminative), *Pachaniya* (digestive) & *Yakrit uttejaka* (liver stimulant) of its contents.
- (ii) In contractile activity- maybe due to action of its ingredient *Ashoka* on uterus i.e., frequent and prolonged uterine contractions without tonic contractions.

Also, it controlled bleeding time more effectively than clotting time, and anti-inflammatory action of ingredients was helpful in reducing inflammation.

❖ **Daruharidra** (*Berberis aristata*- Berberidaceae family)

*Darvi Churna* has a *Raktashodhak* (Blood Purifier), *Raktastambhak* (Haemostatic), *Shothahara* (Anti-Inflammatory), *Vedanasthapan* (Analgesic), *Deepana* (Appetizer), *Grahi* (Water Absorbant), *Jwaraghna* (Antipyretic) actions and cures *Raktapitta* (Hematemesis/Malena), *Vaman* (Vomiting), *Arti* (Giddiness), *Vishaktata* (Poisoning), *Jirna Jwara* (Fever).<sup>[25]</sup>

**Effects of darvi churna seen in raktapradar are as follows**

- a. P/V Bleeding- reduced effectively due to *raktastambhan karma* (Haemostatic Action).
- b. Lower abdominal pain- reduced along with controlled bleeding.
- c. Pallor- less the amount of blood loss with *raktastambhan* (Haemostatic) action more is the improvement seen in pallor.
- d. Bodyache- relieves pain as well as its severity.
- e. Backache- mostly all patient got relieved.
- f. Giddiness, Anorexia, Vomiting- Got improved due to its *Bhedana* (Purgative) and *Rasayana* effects (Rejuvenation action).

So, it can be concluded that this drug is beneficial for overall symptomatic relief in *Raktapradar*.

❖ **Durva** (*Cynodon Dactylon*- Cyperaceae family)

An alkaloid isolated from *durva* plant caused→

- a) Reduced rate or slowing of blood flow in mesenteric capillary of rats & mice.
- b) Increased toxicity of isolated ileum of guinea pig.
- c) Reduced blood sugar levels in rabbit by 15% at the end of 1<sup>st</sup> hour.
- d) Reduced BT & CT in adult Rabbits at a dose of 2.5 mg/Kg i.v. (Dutta, 1974).<sup>[26]</sup>

Research says that *durva swarasa* (Juice of *Cynodon Dactylon*) is the best *raktastambhak* (Haemostatic) drug with phytoconstituents like phenolic phytotoxins, Ferulic, Syringic, p-coumaric, vanillic, p-hydroxybenzoic & o-hydroxyphenyl acetic acid. It is used in curing disease like *Raktapitta*, *Vishaktata*, *Arti*, *Jirna Jwara*.

*Durva* given with any *raktastambhak* (haemostatic) drug used in *raktapradar* enhances its haemostatic action by controlling BT & CT effectively. Probably *Kashaya rasa* (Astringent Taste) with *sheeta virya* (Cold Potency) is responsible for its maximum *raktastambhan* (Haemostatic) action.<sup>[27]</sup>

❖ **Udumbar** (*Ficus racemosa*/F. *glomerata*- Moraceae family)

*Udumbara* have *kashaya rasa* (Astringent Taste), *sheeta veerya* (Cold Potency), ethanolic extract stem bark inhibited COX-2 with IC<sub>50</sub> value of 100 ng/ml and treats inflammatory condition.

Methanol extract of stem bark at a dose of 256-500 mg shows hepatoprotective action, therefore, normalizes liver function.

Tannin present in barks gives astringent property showing antibiotic, antiulcer, antipyretic, antihelminthic, antidiarrheal, analgesic, antitussive, antidiuretic, antifilarial, antifungal, anti-inflammatory, hypoglycaemic, hypolipidaemic, hepatoprotective, renal anticarcinogenic & radioprotective effects.<sup>[28]</sup>

- Aqueous extracts of barks of *F. glomerata* & *F. bengalensis* found to reduce blood sugar in normal as well as alloxan induced diabetic rabbits (Shrotri & Aiman, 1960).

Stem bark's alcoholic extract possessed antiprotozoal activity against Ent. *Hystolytica*. It showed hypoglycaemic activity in albino rats (Dhar et al., 1968).

Benzene extract has significant analgesic activity when compared to morphine. Extracts of petroleum ether, ether and benzene potentiated pentobarbitone induced sleeping time



significantly on oral or intraperitoneally administration to mice and albino rats. (Annual Report 1976-77 CCRIMH).<sup>[29]</sup>

❖ **Bhumyamalki** (*Phyllanthus amarus*/P. niruri-Euphorbiaceae family)

It acts on uterine blood vessels because of its *sheeta virya*; *laghu guna*; *madhura*, *kashaya rasa*; *madhura vipaka*.

It improves metabolic disorders of body, balances hormonal disturbances, and provides overall health of patients by *deepana* (Carminative), *pachana*(Digestive) & *Raktastambhan* (Haemostatic) properties.

Gives tonicity to uterine muscles because of its astringent property.

Provides rid of excessive blood flow from uterus and eradicated *Pitta dosha* because of its *Ushna*, *Teekshna virya* (Hot & Sharp Potency).<sup>[30]</sup>

❖ **Indrayava** (*Halorrhena antidysentrica*- Apocynaceae family)

3- Orhamno glucoside from flowers exhibited significant anti-inflammatory activity in rats against carrageenin induced rat paw oedema (Sethuraman et al., 1984).<sup>[31]</sup>

*Indrayava churna* with *Sharkara* and water is found effective in *raktapradar* reducing duration & quantity of P/V bleeding, pain & total amount of blood loss according to average weight of pad.

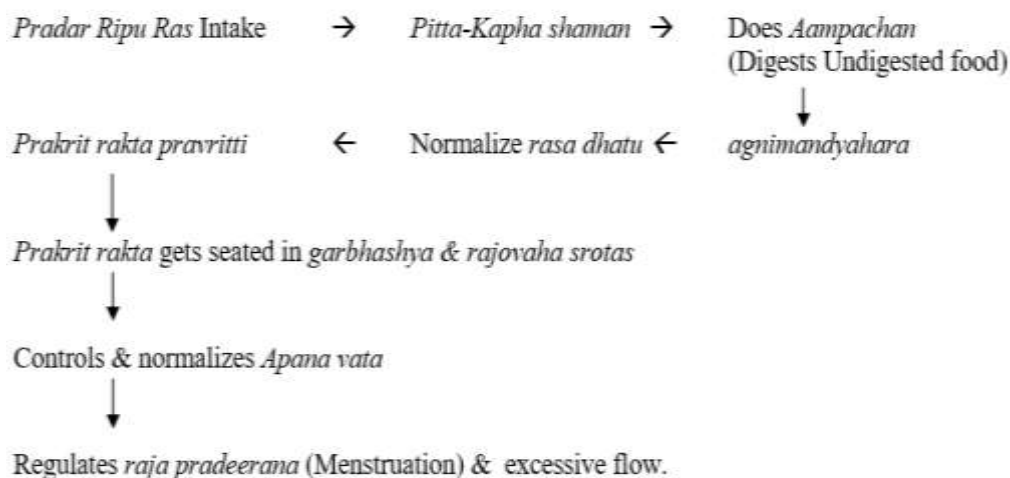
The drug reduced quantity of P/V bleeding due to *Pittashaman* (Alleviation of *Pitta Dosha*), *Agnideepan* (Carminative), *Raktasangrahan* (Preserves Blood), *Raktastambhan* (Haemostatic) Properties. It plays role in reducing bleeding duration but doesn't regularize menstrual cycle.

Also study is focused on symptomatic treatment as the drugs selected are *Pittashamak*, *Garbhasya Balya* (Strengthens the uterus), *Vatanuloman* (Allows easy passage of air from Natural orifices) indicating that these drugs act majorly by their pharmacological action. i.e., *prabhava*.<sup>[32]</sup>

*Pradarripu ras* have *Tikta* (Bitter), *Madhura* (Sweet), *Kashaya* (Astringent) *Rasa*(Taste); *Ushna Virya*(Hot Potency); *Katu Vipaka* (Pungent); *Laghu* (Laghu), *Ruksha* (Dry) *guna* (Properties); *Pitta-Kapha Shamak*, *Pachak* (Digestive), *Jatharagni Vardhak* (Increase



Digestive Fire), *Aam dosha Nashak* (Eliminates Undigested metabolite), *Sarak* (Laxative), *Balya* (Strengthening), *Raktastambhak* (Haemostatic), *Vranaropaka* (Wound Healer), *Purisha sangrahan* (Absorbent) *prabhav* (Effect).<sup>[33]</sup>



### (PRADAR RIPU RAS- MODE OF ACTION)

It suggests that *Pradar Ripu Ras* effectively maintains *Raja kala* (Menstrual Period), *praman evum swaroopa* of *Raja srava* (Quantity & Nature of Discharges).

### OBSERVATION AND DISCUSSION

In *Raktapradar*, *Rakta dhatu* is lost per vaginally. So the main *chikitsa* (Treatment) is *raktastambhan* (Haemostasis) in order to control the excessive loss of *Rakta Dhatu* and preserve the Blood Volume in body.

According to modern aspect, it can be concluded that *raktapradar* is analogous to DUB i.e., Dysfunctional Uterine Bleeding. Its occurrence is considered mainly due to hormonal disturbance. So modern medicine advise hormonal therapy or hysterectomy as treatment choice.

In *ayurveda*, *abhyantara evum bahya chikitsa* is done which mainly included drug/ formulation or *sanshodhana chikitsa*.

From this article we have found that the drugs mentioned here have *Madhura vipaka*, *Sheeta virya* mostly; while a few have *katu vipaka*, *ushna virya*. The probable mode of action is as follows:<sup>[34]</sup>

The drugs with *madhura vipaka* have *pitta shamak*, *dhatu kshinta nashak*, *sheetata* property. So *Madhura vipaka* drug with *Sheeta virya* act together, pacify *pitta dosha* of *pitta pradhan tridoshaj vyadhi*; resolves *rakta dhatu kshaya*; stops *rakta ati srava* (Excessive Loss of Blood) by *Stambhan* action due to *sheeta virya* and *sheetata guna* of *madhura vipaka*.

The drugs with *katu vipaka* have *agni deepana*, *Vridddha Mala nashak* (Eliminates the Increased Wastes from Body), *Raktasanghat bhedan* (Removes the *Doshas* Stuck in *Rakta* Creating Obstruction in Natural Flow), *Srotomarga Vivrinotikaraka Karma* (Opens the Microchannels). So *Katu vipaka* drug with *Ushna virya* acts together, pacify *Vata* by *Ushna guna*, *Ama Dosha* by *Agnideepan guna*, normalizes *doshas* seated in *Rakta dhatu* by *rakta sanghat bhedan* property, *Ati aartava praman vridddhi* by its *vridddha mala nashak* property, and normalizes the cycle by removing all the *aavran* by *srotomarga vivrinokroti* property.

These drugs are mentioned in *Kashaya Skandha*, *Vedna Sthapana*, *Shool Prashaman*, *Shonit Sthapan Mahakashaya* mainly in *Charak Samhita* and in *Nyagrodhadi*, *Priyanguadi*, *Trin/Valli panchmoola gana* in *Sushruta Samhita*.

## CONCLUSION

The entire work entitled “Review Research Article on *Raktapradar*” can be concluded as follows:

- *Raktapradar* is commonly occurring *Yoni Garbhasya gata Vikar* in female of 31-40 yr age group.
- Its incidence increases with parity i.e., seen more in multiparous women.
- The drugs used in *Raktapradar* are either dominant in *Madhura Vipaka-Sheet Virya* or *Katu Vipaka- Ushna Virya*.
- Maximum of these drugs included in study are of *angamarda prashaman*, *shool prashaman*, *shonit sthapan*, *vedanasthapan mahakashaya* or *Kashaya skandha*.

## REFERENCES

1. Prof. K.C. Chunekar, Bhavaprakash Nighantu of Bhavamishra, Edition 2010, Varanasi, Chaukhambha Bharati Academy, Reprint 2010, drug no. (All), (All).
2. Prof. K. Nisteshwar & Dr. Koppula Hemadri, Dravyaguna vijñana, 1st edition, Delhi, Chaukhamba Sanskrit Pratishthan, Reprint, 2010; drug no.(All), (All).
3. Pt. Kashinath Shastri, Pt. Gorakhnath Chaturvedi, Charak Samhita “Vidyotini” Tika, Chaukhamba Bharti Academy, Reprint, 2006; Chikitsa Sthan 28/ 229: 726.

4. Kaviraj Dr. Ambikadutta Shastri, Sushruta Samhita “Ayurveda Tatva Sandipika” Tika, Varanasi, Chaukhambha Sanskrit Sansthan, Edition-Reprint, 2011; 1: Nidan Sthan, 1/37, 299.
5. Dr. Shiv Prashad Sharma, Ashtang Sangrah of Vriddha Vagbhata with “Sashilekha” Sanskrit commentary by Indu, 2nd edition, Varanasi, Chaukhambha Sanskrit Series Office, 2008; Sharir Sthan 1/10, 266.
6. Prof Premvati Tiwari, Ayurvediya prasuti tantra evam stree roga, Edition 2002, Varanasi, Chaukhamba orientalia, Stree- Roga (Part 2), Reprint, 2009; Aartava Vyapad 2/: 172-236.
7. Pt. Kashinath Shastri, Pt. Gorakhnath Chaturvedi, Charak Samhita “Vidyotini” Tika, Chaukhamba Bharti Academy, Reprint, 2006; Chikitsa sthan 30/ 204-210: 777-780.
8. Kaviraj Dr. Ambikadutta Shastri, Sushruta Samhita “Ayurveda Tatva Sandipika” Tika, Varanasi, Chaukhambha Sanskrit Sansthan, Edition Reprint, 2011; 1: Sharir Sthan 2/20,21,22, 15,16.
9. Pt. Kashinath Shastri, Pt. Gorakhnath Chaturvedi, Charak Samhita “Vidyotini” Tika, Chaukhamba Bharti Academy, Reprint 2006, Chikitsa sthan 30/228, 780.
10. Dr. Shiv Prashad Sharma, Ashtang Sangrah of Vriddha Vagbhata with “Sashilekha” Sanskrit commentary by Indu, 2nd edition, Varanasi, Chaukhambha Sanskrit Series Office, 2008, Sharir Sthan 1/12, 266.
11. Kaviraj Dr. Ambikadutta Shastri, Sushruta Samhita “Ayurveda Tatva Sandipika” Tika, Varanasi, Chaukhambha Sanskrit Sansthan, Edition Reprint, 2011; 2: Uttar Tantra 45/47-48, 397-398.
12. Dr. Vandana Baranwal, Dr. Rashmi Sharma, Stree Roga Vimarsha, 1st edition, Varanasi, Chakambha Prakshan, 2013; 6: 99-118.
13. Prof. K. Nisteshwar & Dr. koppula Hemadri, Dravyaguna vijnana, 1st edition, Delhi, Chaukhamba Sanskrit Pratishthan, 2010; 7: 13-15.
14. Shailendra D. Katakound, AYURLOG: National Journal of Research In Ayurved Science, <http://www.ayurlog.com>, 2014; 2(4<sup>th</sup>): 12: 94-99.
15. Nitika Sahebrao Badhiye, AYURLOG: National Journal of Research in Ayurved Science, <http://www.ayurlog.com>, Feb. 2015; 3(16<sup>th</sup>): 1-9.
16. Prof. K.C. Chuneekar, Bhavaprakash Nighantu, 2010 edition, Varanasi, Chaukhamba bharti academy, Reprint, 2013; 9/51, 665.
17. Prof. K. Nisteshwar & Dr. koppula Hemadri, Dravyaguna vijnana, 1st edition, Delhi, Chaukhamba Sanskrit Pratishthan, 2010; 19: 39-42.

18. Neha R. Pandya, Shilpa Donga, Vinay J. Shukla, Sharda Ota, B. Ravishankar and M.A. Pandya, Journal of Drug Research in Ayurved and Siddha, New Delhi, Central Council for Research in Ayurvedic Sciences, July-Dec. 2011; XXXII(3-4): 1-8.
19. Dr. Bulusu Sitaram, Bhavaprakash of Bhavamishra, 2010 (1st) edition, Varanasi, Chaukhamba Orientalia, Reprint, 2014; II: chikitsasthana 68/12, 687.
20. Prof. K. Nisteshwar & Dr. koppula Hemadri, Dravyaguna vijñana, 1st edition, Delhi, Chaukhamba Sanskrit Pratishthan, 2010; 24: 50-52.
21. Sunil More, AYURLOG: National Journal of Research in Ayurved Science, <http://www.ayurlog.com>, Nov. 2013; 1(IV): 29-34.
22. Dr. Indradev Tripathi, Chakradutta- Vaidyaprabha, Edition: Reprint 2011, Varanasi, Chaukhamba Sanskrit Bhawan, 2011, Asrigdara chikitsa 61/5, 377.
23. Shailendra D. Katakoud, AYURLOG: National Journal of Research In Ayurved Science, <http://www.ayurlog.com>, Nov.-Dec. 2014; 2,4th(12): 94-99.
24. Neha R. Pandya, Shilpa Donga, Vinay J. Shukla, Sharda Ota, B. Ravishankar and M.A. Pandya, Journal of Drug Research in Ayurved and Siddha, New Delhi, Central Council for Research in Ayurvedic Sciences, July-Dec., 2011; XXXII: 3-4: 1-8.
25. More Sunil S., International Journal of Ayurveda & Alternative Medicine, Mumbai, [www.ijaam.org](http://www.ijaam.org), May-June, 2014; 2(3): 36-42.
26. Prof. K. Nisteshwar & Dr. koppula Hemadri, Dravyaguna vijñana, 1st edition, Delhi, Chaukhamba Sanskrit Pratishthan, 2010; 110: 205-206.
27. More Sunil S., International Journal of Ayurveda & Alternative Medicine, Mumbai, [www.ijaam.org](http://www.ijaam.org), May-June. 2014; 2(3): 36-42.
28. Shailendra D. Katakoud, AYURLOG: National Journal of Research In Ayurved Science, <http://www.ayurlog.com>, Nov.-Dec. 2014; 2(4th): 12: 94-99.
29. Prof. K. Nisteshwar & Dr. koppula Hemadri, Dravyaguna vijñana, 1st edition, Delhi, Chaukhamba Sanskrit Pratishthan, 2010; 122: 360-362.
30. Sridevi Swamy, Anveshana Ayurveda Medical Journal, [www.aamj.in](http://www.aamj.in), Sept.-Oct. 2015; 1(5): 374-377.
31. Prof. K. Nisteshwar & Dr. koppula Hemadri, Dravyaguna vijñana, 1st edition, Delhi, Chaukhamba Sanskrit Pratishthan, 2010, drug no.50: 99-101.
32. Dr. Prakash Kanade, Dr. Annasaheb Bhujbal, Dr. J.N. Daruwale, Dr. Pradnya P. Sabade, International Journal of Current Research, April 2016; 8(4): 29490-29493.
33. Nitika Sahebrao Badhiye, AYURLOG: National Journal of Research In Ayurved Science, <http://www.ayurlog.com>, 2015, Vol. 3, special Issue-16th Feb., 1-9.

34. Pt. Kashinath Shastri, Pt. Gorakhnath Chaturvedi, Charak Samhita “Vidyotini” Tika, Chaukhamba Bharti Academy, Reprint 2011, sutrasthan 26th chapter, 502-515.