Review Article.

International Research Journal of Ayurveda & Yoga

An International Peer Reviewed Journal for Ayurveda & Yoga

Evaluation Of *Rodhradi Gana* Of Sushruta Samhita: A Literary Review

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VOLUME 4 ISSUE 10

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Article received on 16th August 2021 Article Accepted 24th Oct 2021 Article published 31st Oct. 2021

ABSTRACT: -

Rodhradi Gana is the 6th *Gana* among the 37th *gana* described in 38th chapter- *dravyasangrahniya* of *sutrasthan* in *Sushrut Samhita* and includes *Lodhra*, *Saber lodhra*, *Palash*, *Shyonak*, *Ashok*, *Bharangii*, *Katphal*, *Alvaluk*, *Shallaki*, *Jhingani*, *Kadamba*, *Shal*, *Kadli* thirteen ingredients, which act on *Yoni Roga*, *Kaphaj* disorder and *Medo dushti*. *Yoni roga* (vaginal disorders) can be corelated with the term PCOS (poly cystic ovarian syndrome) of modern disease. These thirteen plants are work together and give enhanced effect. They are also effective individually. These plants having *Madhur* (sweet), *Tikta* (pungent), *Kashaya rasa* (astringent), *Ruksha* (rough), *Laghu guna* (light), *Ushna Veerya*, *Katu Vipak* And *Kapha Vatghana* properties, removes vagina and uterine disorders.

Keywords- *Rodhradi gana*, *yoni roga*, poly cystic ovarian syndrome, *Ayurveda*, *Medo dushti*.

How to cite this article: Meena A, Kaushal K, Gurjar H "Evaluation Of *Rodhradi Gana* Of Sushruta Samhita: A Literary Review" IRJAY. [Online] 2021;4(10):100-107.
Available from: http://irjay.com ; **DOI:-https://doi.org/10.47223/IRJAY.2021.41012**

INTRODUCTION

Rodhradi Gana, is group of 13 *dravyas*, which acts on *Yoni roga, Kapha & Medo dushti* [1]*Yoni roga* can be corelated with term PCOS (poly cystic ovarian syndrome) of modern disease. In Ayurveda, PCOS is not described as a separate heading, but can be portrayed under the headings of various *yoni Vyapadas* (genital pathologies) and *Aartavdushti* (menstrual pathologies). PCOS can be correlated with *Pushpaghni*, *Jataharini* [2], *Aartavkshaya* [3](hypomenorrhea), *Nashtartav* (Amenorrhoea), *Arajska*, *Ksheenaartava* (oligomenorrhea) and *Granthibhuta Aartava* [4] (clotted menses).

Table 1: *Rodhradi Gana* Dravya [5]

S. no.	Name	Botanical name	Family	English name	Useful part
1.	*Lodhra*	*Symplocos crataegoides Buch-Ham.*	*Symplocaceae*	Lodh, symplocos bark	Stem bark
2.	*Saber lodhra*	*Symplocus racemose Roxb.*	*Symplocaceae*	Lodh, symplocos bark	Stem bark
3.	*Palash*	*Butea frondosa koen. ex Roxb.*	*Fabaceae*	The forest flame	Seed, niryas, flowers
4.	*Shyonak*	*Oroxylum indicum vent.*	*Bignoniaceae*	Midnight horror, Indian trumpet flower	Stem bark, seed
5.	*Ashok*	*Saraca asoca (Roxb.) De Wilde*	*Cesalpiniaceae*	Sorrowless tree	Bark
6.	*Bharangii*	*Clerodendrum serratum spreng.*	*Verbinaceae*	Blue- flowered glory tree	Stem bark
7.	*Katphal*	*Myrica esculata Buch-Ham*	*Myricaceae*	Box myrtle, Bay-berry	Stem bark
8.	*Alvaluk*	*Prunus cerasus linn.*	*Rosaceae*	Dwarf cherry	Beej majja
9.	*Shallaki*	*Boswellia serrata Roxb.*	*Bursaraceae*	Indian olibanum tree	Bark, niryas
10	*Jhingani*	*Oodina woodier Roxb.*	*Anacardiacea*	Indian ash tree, Moya	Gum, bark
11	*Cadamba*	*Anthocephalus cadamba Miq.*	*Rubiaceae*	Burflower- tree, Leichhardt pine	Fruits, stem
12	*Shal*	*Shorea robusta Gaertn. f.*	*Dipterocarpaceae*	Sal tree, Indian dammer	*Niryas*
13	*Kadli*	*Musa sapientum linn.*	*Musaceae*	Plantain	Fruit, kand ras

Table 2 Properties & action of *Rodhradi gana dravyas* [6-7]

S.No	Sanskrit name	*Guna*	*Rasa*	*Veerya*	*Vipaka*	*Doshkarma*	*Main karma*
1.	*Lodhra*	*Laghu, ruksha*	*Kashay*	*Sheet*	*Katu*	*Kaphapitta shamak*	*Aartav sangrahniya, shothaher, rakta stambhan*
2.	*Saber lodhra*	*Laghu, ruksha*	*Kashay*	*Sheet*	*Katu*	*Kaphapitta shamak*	*Aartav sangrahniya, shothaher, rakta stambhan*
3.	*Palash*	*Laghu, ruksha, sarak*	*Katu, tikta, kashay*	*Ushna*	*Katu*	*Kaphapitta shamak*	*Pamehghna, grahi, deepan*
4.	*Shyonak*	*Laghu, ruksha*	*Tikta, kashay*	*Sheet*	*Katu*	*Kaphavata shamak*	*Bastirogher, vedna sthapan, shothaher*
5.	*Ashok*	*Laghu, ruksha*	*Kashay, tikta*	*Sheet*	*Katu*	*Kaphapitta shamak*	*Garbhashaya, kashta aartav, raktapradar*
6.	*Bharangi*	*Laghu, ruksha*	*Tikta, katu*	*Ushna*	*Katu*	*Kaphavata shamak*	*Raktotkleshak, anulomak*
7.	*Katphal*	*Laghu, tikshan*	*Kashay, tikta, katu*	*Ushna*	*Katu*	*Kapha vata shamak*	*Shukrashodhan, garbhashayasankochak, vednasthapan*
8.	*Alvaluk*	*Laghu*	*Kashay*	*Sheet*	*Katu*	*Kapha shamak*	*Yonidosha*
9.	*Shallaki*	*Laghu, ruksha*	*Madhur, tikta, katu*	*Ushna*	*Katu*	*Kapha pitta shamak*	*Purish virjaniya*
10.	*Jhhingnii*	*Laghu, ruksha*	*Madhur, katu, lavan, kashay*	*Ushna*	*Katu*	*Vata shamak*	*Yonishodhini*
11.	*Kadamba*	*Ruksha*	*Madhur, kashay, lavan*	*Sheet*	*Katu*	*Kaphakarak, vayujanak*	*Sarak, shukrashodhan*
12.	*Shal*	*Ruksha*	*Kashay*	*Sheet*	*Katu*	*Kaphashamak*	*Yoni roga, kaphaj roga*
13.	*Kadli*	*Guru, snigdha*	*Madhur*	*Sheet*	*Madhur*	*Vatakapha shamak*	*Atyartav, prameh, rakta vikar*

These 13 *dravyas* (drugs) comprising *rodhradi gana* majorly *has Madhur* (sweet), *Tikta* (pungent), *Kashay rasa* (astringent), *Ruksha*(rough)-*laghu* (light) *guna, Ushna veerya, Katu vipak* and *Tridosh shamak (*mainly *kaphavataghna)* properties responsible in *Samprapti Vighatana* (break the etiopathogenesis) of PCOS.

MATERIAL & METHODS

Interpretative study of the herb, *Lodhra, Saber lodhra, Palash, Shyonak, Ashok, Bharangii, Katphal, Alvaluk, Shallaki, Jhingani, Kadamba, Shal, Kadli* thirteen ingredients from the classical text like Sushruta Samhita, Bhavprakash Nighantu, Priyvrat sharma, and other available literature is done.

Aetiology-

Those occur in women due to their faulty lifestyle habits, vitiated menstrual blood, defects in ovum (*Beeja*) (hereditary or congenital defects) and the destiny [2]. In the content of *Yonivyapad*, there are four basic causative factors i.e., unwholesome lifestyle, menstrual disarrays (*Dushti* Of *Antahpushpa* i.e., ova and *bahipushpa* i.e., menstrual blood), genetic disorders involving *Vata* And *Kapha Doshas* along with *Meda Dhatu Dushti*. On the basis of ayurvedic interpretation pcos can be enumerated as *Rasa Pradoshaja* and *santarpanottha vyadhi*.

Pathogenesis & Symptoms [8]: -

Nidana sevan ------ Agnimandhya-------Aamotpatti------Ras dhatu dushti

Aartav Dushti

- Menstruation does not appear in its, appropriate time or delayed (prolonged inter-menstrual period).
- Deficiency or loss of *aartava*.
- Pain in vagina.
- Woman gets her menstruation but doesn't conceive.
- "*Sthulya- lomasha -gandha*" i.e., cheeks are corpulent and covered with hairs.
- Channels carrying *aartava* are obstructed by *vata* and *kapha*, so not discharged monthly.

Kapha Vridhhi

Srotorodha

Vata prakopa & medo vridhhi

Sthoulya

Table 3: Shows chemical constituents and pharmacological properties [9-15]

Sr. No	*Dravya* name	Chemical constituents	Extract /Active chemicals	Mode of action	Previous study
1.	*Lodhra*	Glycosides, proanthocyanidin-3-monoglucofuranosides of 7-o-methyl and 4-o-methyl-leucopelargonidin.	Loturine, Isoloturine and harmane extract of stem bark	It has anti-androgenic effect that helps to reduce the level of testosterone and increases the levels of female hormone like FSH, LH, Progesterone, oestrogen in pcos.	On rats
2.	*Saber lodhra*	Glycosides, proanthocyanidin-3-monoglucofuranosides of 7-o-methyl and 4-o-methyl-leucopelargonidin.	Loturine, Isoloturine and harmane extract of stem bark	It has anti-androgenic effect that helps to reduce the level of testosterone and increases the levels of female hormone like FSH, LH, Progesterone, oestrogen in pcos	On rats
3.	*Palash*	Buterin, bitein, butin, triterpene, isobutrin, coreopsin, iscocoreopsin, sulphurein, monospermoside, chalocones, aurones, flavonoids and steroids.	Ethanolic and aqueous extract of flower	It has antidiabetic activity by reducing the level of total cholesterol and aqueous extract showed anticancer activities by accumulation of cells in G1phase and inhibiting cell proliferation with significant induction of apoptotic cell death.	On rats
4.	*Shyonak*	Baicalein-7-O-diglucoside (oroxylin B), baicalein-7-O-glucoside, chryoin, apigenin, prunetin, sitosterol, oroxindin, biochanin-Ellagic acid, 6 and 7- glucuronides,	Dichloromethane, ethyl acetate and acetone extract of the stem bark.	Inhibition of pancreatic lipase enzyme and Adipogenesis in fat tissue.	On mice
5.	*Ashok*	Flavonoids, terpenoid, lignin, cardiac glycoside, phenolic compounds, tannins, leucoanthocyanidins.	Aqueous extract of the stem bark.	Bark is strongly astringent and uterine sedative, acts directly on muscular fibres of uterus. It's stimulating effect on endometrium	In -vitro test on rats

				and ovarian tissues and making contractions more frequent and prolonged.	
6.	*Bharangii*	D-mannitol, hispidulin, cleroflavon, apigenin, scutellarin, serratagenic acid, acteoside, verbascoside, oleanolic acid, clerodermic acid, γ-sitosterol, β-sitosterol, cholestanol, clerosterol, campesterol and 24-ethylcholesterol.	n-hexane, methanol, aqueous extract of stem bark	Methanol extract exhibited maximum reduction of blood glucose and better glucose tolerability.	On rats
7.	*Katphal*	Myricanol, myricanone, epigallocatechin 3-O-gallate, gallic acid, myricetin.	Ethanolic extract of stem bark	Ethanolic extract has antidepressant effect. It's posses' dose dependent anxiolytic activity. When oral administration of ethanol extract at dosage of 100,200 and 400mg/kg was conducted.	On rats
8.	*Alvaluk*[16]	Protocatechuic, P-coumaric, gerulic and diferulic acid, tectochrysin-5-glucoside, genestein-5-glucosid.	Ethanolic extract of stem bark	Expression of progesterone receptor and HAS2 in cumulus cells, Oocyte fertilization rate also increased significantly.	On mice
9.	*Shallaki*	Triterpenoids, β-Boswellic acid,3-O-acetyl-β-Boswellia acid, 11-keto-β-Boswellia acid.	Methanolic extract of gum resin.	Beta-Boswellic acid has anti-carcinogenic, anti-humour, anti-hyperlipidaemic activities. It inhibits protein synthesis by interacting with ribosomal protein and thus modulates cancer progression.	In-vivo study
10.	*Jhingnii*	Tannins, lignin, starch, fat, mucilage, cellulose, cutin, calcium oxalate crystals, phytosterol.	Methanol and aqueous extract of stem bark.	It prevents abnormal white, clumpy discharge in women.	On mice

11.	*Kadamba*	Triterpenes, triterpenoid glycosides, flavonoids, saponins, indole alkaloids, cadambine, cadamine, isocadam bine, isodihydrocadambin.	nol extract of stem bark	It decreases total cholesterol, phospholipids, triglycerides. Inhibition of lipid peroxides and by rapid increase in superoxide dismutase and catalase activity.	On rats
12.	*Shal*	Nor-triterpene, dammarenolic acid, Asiatic acid, dipterocarpol, triterpenes acid, tannic acid and phenolic contents.	70% ethanol extract of resin.	Anti-obesity effect of hydro-alcoholic extract of leaves on monosodium glutamate induced obesity.	On rats
13.	*Kadli*	Potassium, calcium, sodium, iron, bromine, rubidium, strontium, zirconium and niobium.	Methanolic extract of stem.	It directly evoked twitches and potassium induced contraction in skeletal muscles.	On rats

DISCUSSION

PCOS occurs by *Kapha* vitiation, leading to *Srotorodha* (obstruction of channels) and subsequentially *Vatavigunya*, *Agneya Guna* Of *Pitta* is depleted at *dhatu* level. As the main pathology of PCOS reveals cyst formulation which can be considered as *granthi* (cyst) in Ayurveda, *Rodhradi gana* can be used in *kaphaj* disorder, *medodushti* and *yoni roga* (vaginal orders). This pathological condition as *Dhatwagnimandhya janya beejgranthi vikara* (genetic orders) on the basis of *Dosha*, *Dushya*, *Agni*, *Srotas* etc by keeping symptomatology of disease in conscious. PCOS is caused by *Dhatvagni Vikriti* and the *adhishthan* (place) of disease is *Beejgranthi* thus it can be called the disease as *Dhatwagnimandhya janya beejgranthi vikara*.

CONCLUSION

Rodhradi gana classified as being antidote to the deranged *Kapha*, being astringent in its properties and removing vaginal and uterine disorder, neutralise the effect of poison (antitoxic) and act as a styptic and purifying agent in a case of ulcer and arrests all secretions and excretions of the body. Due to *Ushna* (Hot) And *Tikshna Guna* (Sharp) Of *Rodhradi Gana Dravya* and strong massage impact the *virya* of medication goes into the body. Thereafter it opens the *Siramukh* (opening of veins), does the digestion of *Kapha* And *Medas*. So, we concluded that PCOS with *Rodhradi gana* was profoundly successful in reducing weight, BMI and Lipid(mg/dl) profile with a significant reduction in symptoms of *Sthoulya* (obesity).

Acknowledgment: Nil.
Financial Support: Nil.
Conflict of Interest: Nil

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