ABSTRACT
Vaginal discharge is a common complaint of women coming for medical consultation, it is characterized by discharge per vagina, with itching. It is very common in developing countries like India where unhygienic conditions prevail. Stressful Modern life styles, Food Habits, Social status. It is a common problem which affects women during reproductive age. WHO has estimated that there are 333 million new cases of curable Vulvovaginal infections per year. Many formulations have been mentioned in Ayurvedic texts for treatment of Yonigatasrava. Panchvalkal has been explained in Bhavprakash. The main objective of this review article is to discuss the therapeutic uses of Panchvalkal in various diseases and to discuss the different pharmacological properties and therapeutic uses of Panchvalkal. The selected drug is found to be effective in vaginal discharge w.r.t. to its Antimicrobial properties. It helps in eliminating symptoms like Srava, Kandu, Dorgandhya, Vedana etc. it has Kashya and Katu Properties. These Gunas are effective on vitiated Kapha and normalise it. The present attempt to encompass the up to date comprehensive literature to Study the mode of action of Panchvalkal in vaginal discharge w.r.t. to Ayurvedic properties and Modern pharmacology.

KEYWORDS: Vaginal Discharge, Panchvalkal, Yonigatasrava, Pharmacology.

INTRODUCTION
Ayurveda is the science of life, so far as the procreation of human being is concerned woman play most important role in the fulfillment of biological cycle. That is why Achary Charaka has glorified the presence of women by saying that she is the bearer of offspring Dharma, Artha and Lakshyami and two World[10]. Healthy women, healthy world embodies the fact that as custodian of family health, women play a critical role in maintaining the health and wellbeing of their communities. Women often ignore and delay self-care as they pay more attention towards family and because of this Negligence, women often suffer with health problems. In all classics Yonisrava is mentioned as symptom of Yonivyapada. Description of Samprapti of Yonivyapada is not available in any single Samhita of Ayurveda. Hence vaginal discharge is described as a symptom Yonivyapada.

Aims and objectives
The main aim of the Article is to Study the Mode of action of Panchvalkal Kwath in Vaginal Discharge w.r.t. to Ayurvedic properties and Modern Pharmacology.

Vaginal discharge
Vaginal discharge is the most common gynecological problem faced by women at one time or another in their life. Abnormal vaginal discharge have been considered as a symptom of so many disease and Sometimes it is so much pronounced that it over-shades the actual disease. Normally vaginal discharge occurs in regular variation and consistency during different course of time like Menstrual cycle, Pregnancy, Lactation, postmenopausal etc. It may be physiological or pathological. Pathological need necessary treatment and various causes are candidiasis, bacterial vaginitis, Endometriosis etc. The other factor is hormonal imbalance which affects physiological Vaginal pH and causes excessive white Vaginal discharge called as Leucorrhoea, which affects women psychologically and physically and disturb her quality of life till the extent that patient sometimes prefer to undergo hysterectomy. According to Ayurveda, due to Nidana Sevana which includes Kapha, Vattaavum Pitta vardahk Aahar Vihar Agnimandy occur. Agnimandy leads to Aamotpati. Due to Aamotpati kapha predominant Doshdusti occur by Snigdha and Picchila guna with Anubandh of Vata by Chala Guna and Pitta by Drava, Visra Avum Sara Guna. Then diffusion of Doshas occur in whole body through Siras and Srotas. Doshas reaches to Yoni and Garbhashya by the driving force of Apanvayu where Sthanshamshraya of Doshas occur in Yoni and...
Garbhashya lead to Garbhashya Avum Yonidusti. Other Nidana like Ativyavaya cause Sthanik Uttejna leads to Vatta Avum Kapha Dusti, Apadravya Prayoga causes Yonikshata (which leads to Yonigata Vrana Avum Soth (Vaginitis)) causes Kapha Dusti, due to Yoni Adhavan Krimi Uttapati occur which leads to Vata Avum Kapha Utpatapi and Vegadharan leads to Apana Vayu Dusti. Ultimately all these Sthanik causes leads to Yonidusti consequently, Dushita Yoni by vitiation of Doshas influenced by Sthanika Etiological factor leads to Yoni Srava.[3]

AYURVEDIC PHARMACOLOGY

<table>
<thead>
<tr>
<th>Drug</th>
<th>Botanical Name</th>
<th>Rasa</th>
<th>Guna</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaat</td>
<td>Ficus bengalensis</td>
<td>Kashya</td>
<td>Guru Ruksa</td>
<td>Sheeta</td>
<td>Katu</td>
<td>Kaphapittahsamak</td>
</tr>
<tr>
<td>Udumbarra</td>
<td>Ficus glomerata</td>
<td>Kashya</td>
<td>Guru Ruksa</td>
<td>Sheeta</td>
<td>Katu</td>
<td>Kaphapittahsamak</td>
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<tr>
<td>Palasha</td>
<td>Ficus lacor</td>
<td>Kashya</td>
<td>Guru Ruksa</td>
<td>Sheeta</td>
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<td>Pareesh</td>
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<td>Katu</td>
<td>Kaphapittahsamak</td>
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<tr>
<td>Pipal</td>
<td>Ficus religiosa</td>
<td>Kashya Madhura</td>
<td>Guru Ruksa</td>
<td>Sheeta</td>
<td>Katu</td>
<td>Kaphapittahsamak</td>
</tr>
</tbody>
</table>

According to Rasa

Kashaya Rasa has Stambhana, Shoshana, Kledahara properties by virtue of which Dravata of Pitta and excessive secretion of Shleshma and Kleda gets pacified. Kashaya Rasa is mainly formed by conjugation of Vayu and Prithvi Mahabhata. Vayu is Ruksa in quality and dries up the excessive fluids present in the tissues while Prithvi by virtue of Kathina and Sthira Guna which are opposite to Drava and Sara Guna reduces the Srava. So, Kashaya Rasa by virtue of its Guna restrains Srava[6], Tikta Rasa is a combination of Vayu and Akasha Mahabhata. These two Mahabhata having qualities opposite to Kapha. Tikta Rasa is having Kanduguhna, Kleda, Puya and Kaphasoshosha pharmacological properties. Katu Rasa drugs pacifies Kapha, which is the most important Dosha responsible for Yoni Srava and is Krimighna, Kanduguhna, Shodhaka, Srotovisharaka, Shothhara and Kledauapshoshaka. Katu Rasa is formed by Vayu and Agni Mahabhata having qualities opposite to Kapha (Prithvi & Jala), thus, lessens Srava.[7] Madhura Rasa has Vata and Pita Shamaka properties and is Vranaropaka, Prinana, Jeevana property.[8]

According to Guna: Ruksa Guna also restrains Srava by asset of its Stambhana action. It may pacify vitiated Kapha and Kleda[9]. Laghu Guna, drug pacifies the Snigdhta and Pichhila properties of vitiated Kapha and is Ropana.[10]

According to Veerya: Ushna Veerya pacifies kapha Dosha and is Shoshash.

According to Vipaka: Katu Vipaka are Kaphashamakal[11] which is the most important Dosha responsible in Yoni srava.

So Panchavalkala is one of the ideal combinations for a vast range of therapeutics focused in Ayurveda like Vranaropana (Wound healing), Shothahara(Anti-inflammatory), Graahi, Visarpahara, Vedanasthapan (Pain reliever), Stambhana (striping action), Raktashodhak (hemostatic), etc Panchvalkal i.e., bark of five trees viz. Vata, Udumbara, Ashwatta, Parisha and Plaksha. Panchvalkal has Kashaya Rasa (Astringent properties)[12].

MODERN PHARMACOLOGY

Vata

Ficus bengalensis is a large evergreen fast growing tree upto 30 meter with spreading branches and many aerial roots and found throughout India. It is commonly known as Banyan tree. All the parts of the plant are Acrid, Sweetish, Astringent, Refrigerant anodyne, Dupuative, Anti-inflammatory, Antidiarrhoeal, Antiemetic and Tonic[13]. The bark, leaves and fruit of Ficus bengalensis are used as Astringent, Haemostatic, Antiseptic, Anti-inflammatory, Antioxidant and Anticancer agent and is considered to be effective in Dysentery, Diabetes, Leucorrhrea, Menorrhage, Vaginal disorders, Nervous disorder as tonic and deficient lactation[14]. The bark contain leucopelargonidin 3-o-alpha-l rhamnoside and leucocynidin,3-o-alpha-d galactosyl cellobioside, glucoside beta glucoside, pentatracontan-5-one, beta sitosterol alpha-D glucose[15]. Leucopelargonin, a glucoside isolated from bark has Antidiabetic effect on alloxan-induced diabetes[16]. Leaves contain CaO, phosphorous, rutin, friedelin, taraxosterol, lupeol, Beta sitosterol, bengalenoside and the latex contain Caoytchone, resin, albumin, cerin, sugar and malic acid[17]. Various activities of bengalensis has been proved like, the ethanolic and petroleum ether extracts showed a greater anti-inflammatory effect available online at: http://ijapr.in

Kavitha Sharma et al. Study of Panchvalkal Kasaya in Vaginal discharge W.S.R to Antimicrobial Properties

Available online at: http://ijapr.in 53
compared with the standard drug Indomethacin\cite{18}. Root extract show paralytic and death of Earthworm executes its Anti-helminthinc property\cite{19}, Anti-diabetic and Ameliorative activity\cite{20}, Analgesic and Antipyretic activity\cite{21}, Antibacterial activity\cite{22}, Antioxidant activity\cite{23}, and water extract of bark have Hypolipidaemic activity\cite{24}.

**Udhumar**

*Ficus glomerata* is commonly known as cluster fig or fig tree. It is an evergreen tree 15-18 m high, young shoots glabrous, pubescent tree\cite{25}. *Ficus glomerata* extract have reported significant medicinal and pharmacological properties like Antimicrobial, antioxidant activity\cite{26}. All the parts of this plant are medicinally important. The bark is highly efficacious astringent, refrigerant, carminative, stomachic and used as Antiseptic, Antipyretic, Vermicidal, and bark's decoction is used in treatment of various Skin Disease, Ulcers and wounds\cite{27}. It possess various properties like Hepatoprotective\cite{28}, Ant diabetic, Anti-inflammatory, Antipyretic, Antitussive, Hypoglycemic and Anti-diuretic\cite{29}. Latex aphrodisiac and administration in Haemorrhages, excessive thirst, Diarrhea, Diabetic boils and vaginal disorders.\cite{30} Acharaya Charaka has categorized Udhumar as Mutrasangrahaniya (Antidiuretic herb)\cite{31} and Acharaya Sushruta as Bhagna Sandhniya (promote healing in fracture)\cite{32}.

**Plaksha**

*Ficus Lacor* is a large spreading deciduous fast growing tree. All parts are Acre, pungent, cooling, useful in disease of the blood, Vagina, burning sensations, biliousness, leprosy, Hallucinations, Loss of consciousness. The fruit is Sour, the seeds are useful in Bronchitis, Biliousness, Scabies, Boils, Inflammation. According to API, Fruit and bark is used in syncope, delirium and illusion and unstable state of mind. The stem bark of the plant yield acetate of long chain alcohols, methylrincinolote, beta-siterol, lanasterol, caffeic acid, bergenin. The triterpenoids, lupeol and alpha and beta amyrin, Flavonoids likeisorbifolin and scutellarein present in leaves\cite{33}, Anti inflammatory\cite{34}, Hepatoprotective, Antibacterial, Anti-arthritic, Antidiabetic and used for menstrual disorders, leucorrhea, Estrogenic, erysipelas, ulcer, epistaxis.\cite{35}.

**Pipal**

A Large glabrous usually epiphytic tree, leaves are coriaceous, all the parts are bitter, sweetish, acid, cooling, useful in disease of the blood, vagina, uterus given in Leucorrhea, Burning sensation, ulcers. Root is useful in Stomatitis, Gout, and Leucorrhea to promote granulation. The young bark contain s beta-sitosterycoside, Vitamin-D-glycoside, vitamin K, tannin, saponin, lanosterol, stigmastanol, lupen-3-one. It has astringent, antiseptic, laxative, haemostatic, and is useful in bone fracture, urinary discharges, unhealthy ulcer\cite{36}, The bark is astringent, used in Gonorrhea. The fruit is laxative and helps in digestion. The leaves and young shoots are used as a purgative and an infusion of the bark is given internally in scabies. It has Antimicrobial\cite{37}, Hepato-protective\cite{38}, Anti diabetic\cite{39}, Anti-inflammatory\cite{40}, Analgesic\cite{41}, Anti-ulcer\cite{42}, Anti-oxidant\cite{43}, Wound healing properties\cite{44}, Anti-parasitic\cite{45}, Anti-parkinson’s\cite{46} etc.

**Pareesh**

*Thespesia populnea* is a fast growing, medium-sized evergreen tree, up to 10 m tall with yellow, cup-shaped flowers having maroon centre and distributed throughout coastal forests of India and also largely grown as a roadside tree. All the parts of the plant used in traditional system of medicine. The bark, leaves, flower and fruits are useful in cutaneous infection such as Scabies, Psoriasis, Eczema, Ringworm, and Guinea worm. The phytochemical study reveals the presence of carbohydrate, protein, tannins, phenol, flavonoids, Terpenes, Saponins like sesquiterpene, ortho-naphthoquinone compound; 3,6,9-Trimethyl- 2,3-dihydrobenzo[de]chromene-7,8-dione and new sesquiterpene quinines, thespesone and dehydrooxoperezinone-6-methylether.\cite{47} The Ayurvedic Pharmacopoeia of India recommends Pareeshain the Premeha, Raktaipitta, Raktkavikra, Yoniroga, Daha, Trishna, Vrana, Sotha, Balavisarpa, Pama, Khandu, Dadru, Medoroga\cite{48}. Antimicrobial activity\cite{49}, Anti-helminthinc\cite{50}, Anti-inflammatory\cite{51}, Hepatoprotective activity\cite{52}, Anti-diabetic\cite{53}, Antioxidant activity\cite{54}, Diuretic\cite{55}, Anti-implantation activity\cite{56}, Antioxidant activity \cite{57}, Memory enhancer \cite{58}, Analgesic and Anti-pyretic properties\cite{59}, Anti-ulcer activity.\cite{60}

**DISCUSSION**

Ayurveda, the ancient system of medicine mentioned various types of Chikitsa and have unique way of explaining the mode of action drugs. The action of drugs is executed in the body through its pharmacodynamics properties like Rasa, Guná, Veerya, Vipaka along with these Prabhava is the specific property inherited by the drug which cannot be explained and the principle of treatment in Ayurveda is based Samprapti Vighatana which is achieved by relieving Doshas Dushya Sannmurchana. According to Acharya Charaka, Srava is the Atmalakshan of Pitta and also mentioned that any type of Yoniroga does not occur without the involvement of Vata Doshas. According to Acharya Sushruta Puya is not possible without vitiati of Kapha. In Yonisrava, there is Duargandhya,
Atidravata and Daha proves the presence of vitiation of kapha and Pitta Dosha. So Yonisrava can be considered as a Kapha Pitta Pradhan Tridosha vyadhi. In Panchvalkal all the drugs are Kashya Rasa, Sheeta Veerya, and Katu Vipaka and kaphapittashamak. In this disease kapha is vitiated by its Snigdha and Pichhillaguna and Pitta is vitiated by its Drava, Ushna and Viraguna and the vitiated Snigdhaguna is pacify by the Ruksha guna of Panchvalkal and Dravata of vitiated Pitta is pacify by the Shosanaguna of Kashya and Srotoshodhana property by Katu rasa and Krimi char by the Katu rasa. Kashya rasa have Stamabhana property and show static action on discharge and Katu rasa have effect on itching. Tannin acts as Anti-inflammatory by inhibiting enzymes such as 5-lipoxygenase & hyaluronidase, inhibit reactive oxygen or nitrogen compounds, modify intracellular signaling pathways in immune cells. Tannins have been reported to have antibacterial potential due to their basic character that allows them to react with proteins to form stable water-soluble compounds, thereby killing bacteria by directly damaging their cell membrane. Various clinical studies have been done on Panchvalkal Kasaya in Yonisrava and other inflammatory conditions. Acc. to Dr. K shobhabh at et al. Panchvalkal churn lepa has highly significant results in reducing the cardinal signs of Keetavisha. Pallvi Hegde et al. show significant results of Panchvalkal Kwath Prakshalana in vicharchika showing a cleaning as well as healing property and Dr. Dhammananda et al showed Antimicrobial effect of Panchvalkal powder. Many more studies are there like Sakhitha et al., Vyas Palak et al., Kamini Dhiman et al., Pratimachakrawarty et al. etc. showing the significant results of Panchvalkal.

CONCLUSION

According to modern science microorganism are the prime reason for manifestation of disease and Panchvalkal have Antimicrobial Activity due to presence of Tannin, Saponin, Flavonoids, Terpenoids etc. In Ayurveda, equilibrium of Dosha is the main aim of treatment of disease. So in this disease Kaphapitta shamak, Shothahara as well as Krimihara Dravya will be beneficial for the treatment. So it is considered to be a safe herbal medicine without any adverse effects. From above review we can conclude that the Panchvalkal have a wide range of medicinal value like Antimicrobial, Anti-inflammatory, Anti-septic, wound purifying and healing etc. and importance natural product to control Antibiotic Resistance bacteria which are a threat to human health.

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