

An International Journal of Research in AYUSH and Allied Systems

Review Article

AYURVEDIC PERSPECTIVE OF ABNORMAL VAGINAL DISCHARGE

Neelima A1*, Mahesh Dixit2, K. Bharathi3

*1Professor & Head, Department of Prasutitantra & Strirog, PGIA, DSR Rajasthan Ayurved University, Jodhpur. 2Professor & Head, Department of Shalyatantra, MMM Government Ayurved College, Udaipur, Rajasthan. 3Professor & Head, Department of Prasutitantra & Striroga, NIA, Deemed to be University, Jaipur, Rajasthan, India.

Article info

Article History:

Received: 15-03-2024 Accepted: 04-04-2024 Published: 07-05-2024

KEYWORDS:

Abnormal Vaginal Discharge, Ayurveda, poly herbal drug, holistic, Syndrome management, Local treatment.

ABSTRACT

In the context of wide prevalence and growing incidence of abnormal vaginal discharge throughout the globe and due to the lack of effective and safe therapy in modern science, there is an increasing focus on alternative systems of medicine. Ayurveda is an age-old life science that offers great potential in treating the symptom. The present study was taken up to review the theoretical foundations and empirical evidence of Ayurvedic drugs for this.

Apart from consulting the texts in Ayurveda and modern systems, the study got access to internet sources like AYUSH Portal and PubMed, Google Scholar etc. Out of 90 papers identified, forty research papers were selected for review on various aspects of AVD, such as observational studies, clinical studies, review studies. They are reviewed for theoretical background, research techniques adopted, the drugs and methods employed for treatment and the parameters chosen for evaluation of the effects of these drugs.

The results show that Ayurveda has both theoretical foundations and empirical evidence of efficacy of Ayurvedic drugs and shows the promise of evolving a polyherbal formulation to address the symptom holistically.

INTRODUCTION

Abnormal Vaginal Discharge (AVD) is an unabated global health problem in spite of growing access to contemporary medical intervention. This is owing to multiple causes, under or over diagnosis, inadequate control, recurrence, unjudicial use of drugs and their side effects and increasing drug resistance [1]. In view of AVD, forming an important element in the health of reproductive women. it received international focus to address under SDG. Conventional medical treatment may, at the most, help to relieve the symptoms of abnormal vaginal discharge but it could not address the root cause of the problem [2]. The use of antibiotics, penicillin, steroids etc., in the management of AVD in the conventional system and the use of contraceptive pills etc., themselves



precipitate the problem sometimes [3] and therefore, the conventional system is reductionist in some respects. In view of these reasons, WHO encourages Alternative Systems of Medicine (ASM) [4]. Such an approach is not adequate, considering the basic philosophy and practice of Ayurveda and its evidence base.

OBJECTIVE AND METHODOLOGY

The main objective of this paper is to review the works done on AVD both in theory and evidence of therapeutic efficacy of Ayurvedic treatment in the management of AVD. Apart from consulting the texts in Ayurveda for conceptual explanation, the study got access to internet sources like AYUSH Portal and PubMed, Google Scholar etc., for research papers on AVD. Based on keywords and titles ninety papers were traced, out of which forty papers were selected finally for review on various aspects such as observational studies, clinical studies, review studies concerning AVD. They are reviewed for etiology, pathogenesis, diagnosis and treatment in modern and Ayurveda systems of medicine, research techniques adopted, the drugs employed for treatment and the parameters chosen for analyzing the effects of Ayurvedic drugs etc., in addressing AVD and the outcome. Contextually, a comparative approach is followed in Ayurveda and conventional system dealing with AVD.

Review of Observational Studies on AVD

Literature search reveals that several studies were conducted to assess the prevalence of AVD in urban as well as rural settings. Based on these studies, a brief review is presented in Table 1. The review shows that the sample size in the studies varies from a minimum of 42 to a maximum of 898 across different geographical regions in the country and outside. It is presented at two levels. One is the subjective and objective parameters used for diagnosis and identification of factors and the other one is the results of observations as to the nature and extent of prevalence of different components of AVD. A wide range of modern parameters were used in the studies that include Gram stain, vaginal smear, wet smear, pH, KOH, Whiff (amine), Culture, wet mount, clinical tests, Nugent's scoring, pouch culture. The results show that prevalence of AVD ranges between 40% to 73% in

different included studies. The multiple causal attributes include social adversity, heavy work, tiredness, tensions etc. Among AVDs, bacterial vaginosis is prominent that ranges between 19% to 48.8%. This is followed by candidiasis with a range between 14% to 32%, trichomoniasis with 9-19%, intermediate 11-18% while gonorrhea, syphilis account for least proportion of about 2-4%. In AVD, the colour being an important parameter, white discharge ranged between 27 to 76%, curdy white 19%, yellow 8.5% and foul smell in 49% among the reported cases.

It is estimated that bacterial AMR was directly responsible for 1.27 million global deaths in 2019 [4a]. It is observed that there is a paradigm shift in increasing asymptomatic nature, greater magnitude of mixed infections leading to increased need of multiple investigations for confirmation of the diagnosis, non-availability of single test for different microbes, high cost and non -accessibility etc. All these complicate the management of AVD.

Table 1: Results of Observational studies on AVD (Figures in per cent)

S.No	Study	Infections	BV	Candidi as	Tricho	Mixed	Intermedi ate	Gonorrhea	Non - Specific	Color/ Others
1	2	3	4	5	6	3	7	8	9	
1	Usha et al (2015) ^[5]	-	34	30	14		-	2	18	Foul smell 84
2	Sood et al (2018) ^[6]	73	15.5	A F	1.5	34.5	-	-	-	-
	Causes	-	33.47	20-40	8-10		-	-	-	-
3	Uwakwe (2018) ^[7]	Overall 55.6, Progressive 73.6 Non-prog	-	105	HDHA	5	-	-	-	Whitish 76.3 Foul smelling
		47.8								49.6
4	Seth (2017) [8]	-	485	32,0	9.0	,	13.6		15.17	Syphilis35
5	Thakur et al (2010) [9]	73.5 Multifarious	21.5	15.5	1.5	34.5	-	-	-	Curdy white- 19. yellow-8.5
6	Mahivanam (2008) [10]	43.5 With > 1 RTI,	19.1			15.4	-	-	-	<2STIs 17.4
7	Sharma A k (2004) [11]	-	19.1	-	-	-	15.4	-	-	-
8	Rao A (2004) [12]	29.0: (27.9 Endogenous infection)	20.5	-	1.18	-	-	-	-	-

Source: Compiled based on various articles

Ayurvedic Concept

Life is the union of *Satwa* (mind), *Atma* (self), *Indriya* (sensation) and *Sarira* (body). *Upastha* is a motor system that performs the function of urine

excretion and reproduction. The components of *Yoni* are *Doshas- Vata, Pitta, Kapha; Dhatus-rasa, Rakta, Mamsa, Medas; Upadhatu- Stanya- Artava, Kandara-*

sira; Vasa- twacha; Snayu- sandhi; Malas of Kapha, Pitta, Khamala, Sweda from Rasa, Rakta, Mamsa and Medas[13]; Srotas, Ashaya, Kala etc. Srotas is a channel which gives the way to the fluid components travel from one place to the other [13,14] classified into external and internal. Female possesses three extra Srotas opening to the exterior one in each Stana (breast) and *Raktapatha* (vagina). The internal channel is a pair of Artavavaha srotas bearing roots in Garbhashaya which is the extra Ashaya (the structure that has an empty space) and a pair of Artavavahi dhamanis. Malayana are the Srotasas which transport *Malas* to the exterior due to the function of *Anulomana* of Apaana vayu^[13,14]. As Raktapatha is a Bahyasrotas this expels the *Mala* (metabolites) of the reproductive system. Thus, the Srava from this Srotas is termed Yonisrava.

Yoni is diseased when there occur vitiation due to increase in the quantity of Mala. The vitiation can be understood by the heaviness or lightness and excessive retention or flow [13]. Thus, Yoni Srava is nothing but the outcome of the union of Doshas and Dushyas in different permutations and combinations, metabolism occurring due to Dhatugata agnis in the genital system. The variations in the above components lead to Sama, Kshaya, Vriddhi and/ or Dushti' of Srava. This is Nija vyadhi (endogenous). Certain disorders that arise due to excessive, improper sexual activity are given i.e., Agantuja (exogenous).

Abnormal Vaginal Discharge as a symptom seen in the various diseases in Ayurvedic Classics

Table 2: Diseases, Causes and Treatment of AVD in Ayurveda

S.No	Diseases (Dosha/ Prakriti Involved)	Causes	Symptoms	Treatment
1	2	3	4	5
1	Vataja Yonivyapat (Vata)	Women of Vata prakiti consuming diet indulging in the activities aggravating Vata	Sashabda (Swana), Ruk, Phena, Tanu, Ruksha, Alpa; Ruk, Toda, Ayama, Suptata, Vedana, Stambha (Stabdha), Pipilikasriptimiva, Karkashata, Sramsa, Bhramsa, Vankshna- parshwadou vyatham; Supti, Ayasa [13,16,17]	Snehana with Kashmaryadi/ Satawaryadi ghrita, Swedana, Niruha, Anuwasana, Uttarvasti, Seka, Abhyanga with Tailas prepared with Ushna, Snigdha drayas, Pichu with Guduchyadi/Rasnadi taila, Himsra Kalka dharana
2	Pittaja Yonivyapat (Pitta)	Intake of Katu, Amla, Lavana, Kshara	Excess Ushna, Neela/ Peeta/Asita, Kunapagandhi, Putigandhi; Daha, Paka, Jwara, Ushna, Osha ^[13] / Daha raga, Trisha, Moha, Jwara, Bhrama ^[13]	Raktapittanashak- Seetala Chikitsa, Snehana, Seka, Abhyanga, Pichu, Kalka dharana, Uttarvasti,
3	Sramsini/ Srasta/ Prasrasta/ (Pitta)	Kshobhita	Syandate/ Srasate, Duhprasuscha ^[14]	Snehana, Swedana, Niruha, Anuwasana, Uttarvasti Seka, Abhyanga, Pichu, Kalka Dharana, Utkarikadharana,

Avurvedic literature amply describes various conditions giving rise to vaginal discharges per vagina. Different discharges are mentioned in various diseases described under the heads of Artavadushti, Yoni *vyapats*[15], of complications of *Yoni vyapat* followed by symptomatic management for Yoni picchilata, Yoni kleda, Yoni srava, Yoni puya srava, Yoni Asrik Srava, Swetapradara etc in Ayurveda texts along with their treatment. These are the diseases of the reproductive system. The genital tract is the seat of a lesion and discharge is just a symptom there of Avurvedic classics mention the causes of improper diet and lifestyle, menstrual disorders, children born due to the defects in sperm and ovum, and idiopathic. Acharya Charaka classifies the reproductive disorders as *Doshaja (Vata,* Pitta, Kapha individually or in combination) and the cause and the union of Dosha and Dushya. Thus, the predominance of *Doshas* and the specific causes along with the union of *Doshas* and *Dushyas* in permutations and combinations can be attributed to the variation in the characteristics of vaginal discharge. Hence, we will notice various conditions in which different types of vaginal discharges occur. Untreated Yoni vvapats may lead to the general conditions such as Supti, Ayasa, *Jwara*. The diseases that mention the vaginal discharge as the clinical feature are collected along with their cause, associated features, Dosha predominance or the individual constitution prone to the diseases are presented in the Table 2.

			•	Purana, Bandhana
4	Paripluta Yonivyapat (Vata, Pitta)	With holding the natural urges of Kshavathu & Udgara	Suna, Sparshaakshama, Nila- Pita-Asrik Srava Along With Arti; Sroni-Vankhna-Prishtha Arti, Vasti-Kukshi Gurutwa, Gramya-dharmenaruja, Atisara, Arochaka, Jwara	Swedana, Tarpana with Baladiyamakasneha, Pichu, Vataharahara
5	Kaphaja Yonivyapat / Kaphajapradara (Kapha)	Kapha vriddhi due to Abhishyandi dravya/ Gurvadi ahar-vihar [13]	Picchila, Kanduyukta, Atiseetala ^[14] Avedana, Seetala, Kandula, Pandu, Picchila Srava ^[16, 17] Picchilam, Seetam, Ugrakandu, Alpavedana, Panduvarna In Yoni; Pandu, Picchila Artava; Panduvarna ^[13] /Picchilam, Panduvarnam, Guru, Snigdham, Seetalam, Sleshmalam, Ghanam, Mandaruja Artavasrava ^[13]	Ruksha, Ushna Chikitsa, Basti, Kalkadharana, Varti/ Vatalayoni Chikitsa, Raktatisara, Raktapitta, Raktarsha Chikitsa ^[13]
6	Atyananda Yonivyapat (Kapha)		Na santosham gramyadharmena gacchati, Sleshmalinga[14]	
7	Karnini Yonivyapat (Vata, Kapha)	Straining during labour in the absence of labour pain	Karnika, Sleshmalinga [13,14,16,17]	Jeevaniyataila Uttarvasti, Varti,
8	Acharana/Vipluta Yonivyapat (Kapha/ Vata/Krimi)	Non- cleanliness (Adhavana)	Purvam purushadatirichyate, Sleshmalinga[14] Jantu Utpatti, Kandu, Atinara kankshini [13]	Uttarvasti, Varti, Pichu, Snehana, Swedana etc. Vatahar Ahara
9	Aticharana Yonivyapat (Kapha/ Vata)	Excessive coitus	Sleshmalinga, Sopha, Supti, Ruja ^[14,13]	Snehana, Niruha, Anuwasana, Swedana, Ahara and Upanaha with Snehadravya, Utkarika
10	Upapluta Yonivyapat (Vata, Kapha)	With holding the natural urges of Cchardi & Niswasa	Pandu/Sweta srava along with Toda [13,16,17]	Pichu, Abhyanga, Anuwasanavasti with dhatakyaditaila; Snehana, Swedana etc Pichudharana, Santarpana
11	Vamini (Vata, Pitta/ Pitta)		Kevala sukra vamana/ Raktamisrita sukra ^[13,14]	Snehana, Swedana etc Pichudharana, Santarpana
12	Sannipataj Yonivyapat/ Sannipatajapradar (Tridosha)	Intake of congenial and non-congenial diet simultaneously	Sweta, Picchila srava; Daha, Sula [13,14,16,17]/Srujati Pratyanikam balam, Durgandhi, Picchilam, Peetam, Vidagdham, Sarpirmajjavasopamam [13	Mixed treatment, Virechana, Pichu/Vatalayoni Chikitsa, Raktatisara, Raktapitta, Raktarsha Chikitsa [13]
13	Sanda Yonivyapat (Vata/ Tridosha)	Vitiated ovum causing congenital anomalies in female reproductive	Nrudweshi, Astani, Anartava, Kharasparsha cha maithuna [13,14,16,17]	Vatanashak Chikitsa, Utkarikadharana, Laghuphala ghrita pana

			11111, 202 1,11(2).100 101	
		system. (Beejadosha)		
14	Phalini/Andini Yonivyapat (Tridosha)	Young woman having coitus with a man of big penis	Sarvalinga [14]	
15	Mahayoni/Mahati Yonivyapat (Vata/ Tridosha)	Coitus on uneven and troublesome bed	Firmness and dilation of orifices of uterus and vagina, dry-frothy menstrual blood, pain during menstruation, muscular protuberance, <i>Parva-vankshna sula</i> [13,14,16,17]	Snehana, Swedana, Niruha, Anuwasana, Uttarvasti, Utkarikadharana, Purana
16	Suchivaktra Yonivyapat (Vata/ Tridosha)	Intake of diet increasing <i>Vata</i> during pregnancy	Anudwara, Atisamvrita [13,14,16,17]	Vatanashak Chikitsa, Utkarikadharana, Laghuphala ghrita pana
17	Gulma (Rakta)		Yonya dourgandhyamasrava [13,16, 17]	Snehana, Swedana, Snigdha Virechana, like Pitta gulma, Bahusirayaschavedhanam [18,13,14,16,17]
18	Arshas		Durgandha, Picchila, Rudhira srava	Bheshaja, Kshara, Agni, Shastrakarma
19	Asadhya Raktapradar		Sashwata sravatyathasravam, Trishna, Daha, Jwara, Kshinaraktam, Durbalam ^[13]	Asadhyam
20	Pandureasrigdare ^[13]			Pichu, Pinda, Dhupana
21	Picchila yoni [13]		7 L	Varti
22	Pariklinna yoni [13]	3	SHDHAI	Kalka
23	Upadamsa (Kapha)		Sotha with Kandu, large, white, hard, discharge [19]	Samsodhana, Alepa, Seka, Raktamokshana
24	Parisruta Jataharini	Due to infliction by <i>Jataharini</i>	Krisha, Abhikshnasrava from Yoni ^[18]	

Source: Compiled by authors based on Ayurveda classics

Table 2 shows that there is a difference in quantity and qualities such as colour, consistency, odour of the vaginal discharge according to *Dosha* predominance. The modern science accepts the normal colour of the discharge as transparent or white. The discharge due to *Prakrita kapha*, *Pitta* and *Vata* may be normal. The abnormal discharge due to *Kapha* is white. Hence, considering the *Kapha* derangement as the initial one followed by *Tridosha*, *Vata* and *Pitta* is given in the Table 3. The other clinical features such as vulvar itching, foul odour from vagina, pain in lower abdomen, weakness as associated symptoms mentioned in the diseases may be viewed, combined under the *Dosha* predominance along with all the treatments. The complaint, history, examination of vaginal discharge and due consideration of other clinical features hint towards the line of treatment of the vaginal discharge.

Table 3: Colour, Consistency, Clinical Features and Treatment of AVD in Ayurveda

Dosha	Quantity/Colour/ Consistency/odour of Vaginal Discharge	Clinical Features	Treatments
1	2	3	4
Kapha	Pandu/Picchila	Sheeta, Kandu, Alpavedana, Picchila, Toda, Purvam Purushadatirichyate, Sleshmalinga	Uttarvasti, Kalka dharana, Varti, Sechana, Dhupana

Neelima A, Mahesh Dixit, K. Bharathi. Ayurvedic Perspective of Abnormal Vaginal Discharge

		^[14] Jantu Utpatti, Kandu, Atinara Kankshini ^[13] Sukra Vamana ^[13]	
Tridosha	Sweta/ Picchila/ durgandhi	Daha, Sula, Srujati Pratyanikam Balam, Durgandhi, Picchilam, Peetam, Vidagdham, Sarpirmajjavasopamam [13] firmness and dilation of orifices of uterus and vagina, dry-frothy menstrual blood, pain during menstruation, muscular protuberance, ParvaVankshna Sula [13,14,16,17] Anudwara, Atisamvrita [13,14,16 17]	Uttarvasti, Kalka dharana, Varti, Dhupana
Vata	Alpa/ Asra/ Tanu, Ruksha, Phena	Toda, Vedana, Stambha, Pipeelikasruptimiva, Stabdha, Ayama, Sramsa, Swana, Karkasha, Supti, Ayasa	Snehana, Swedana, Niruha, Anuwasana, Uttarvasti Seka, Abhyanga, Pichu, Kalka Dharana, Pindadharana, Utkarikadharana, Uttarvasti
Pitta	Excess/ Ushna, Neela, peeta, Asrik/ Kunapagandhi, putigandhi	Daha, Raga, Paka, Ushna, Osha [13] / Trisha, Moha, Jwara, Bhrama [13] Syandate/ Srasate, Duhprasuscha [14] Gramyadharmena Ruja, Suna, Sparshakshama, Sroni-Vankshana, -Prishtarti, Vasti- Kukshi Gurutwa [13]	Snehana, Virechana, Raktapittanashak, Seka, Abhyanga, Pichu, Kalka dharana, Uttarvasti, Avachurnana

Source: Authors' compilation - based on Ayurvedic classics.

Review of Studies on Sweta Pradara (Leucorrhoea)

Ayurveda, also suggests several drugs for prevention and cure, but in the context of modern science, these drugs need standardization for mass use. One of the important changes in the reproductive health is prevalence of *Swetha pradara* (leucorrhoea).

A number of studies were conducted to assess the efficacy of Ayurvedic drugs in the cure of the disease. These studies refer to the period 1985 to the present (Table 4). All of them being clinical studies, the sample size varies between 30 to 64, but most of them are concentrating in the range from 30 to 40 subjects. The parameters include subjective as well as objective. They include a wide range, but vary among different studies. Some of them are vaginal discharge (*Yoni srava*), vaginitis (*Yoni sotha*), leucorrhoea (*Sweta pradara*), back ache (*Katisula*), pruritis vulva (*Yoni kandu*), weakness (*Dourbalya*), dizziness (*Bhrama*), urinary tract infection, cooling (*Seetalatha*), anemia, anorexia (*Arochaka*), cervical congestion, dysuria, menorrhagia, *Jangha vedana* and nonspecific leucorrhea. The drugs used range in *Nimba*, *Amlaka*, *Guggulu*, *Vatavalka*, *Kukkutanda twak Bhasma*, *Daru Haridra*, *Mayaphala*, *Dhatakipushpa*, *Nagakesara*, *Lodhra kwata*, *Trikshir valkal*, *Priyangvadi vati*, *Karanja* and some herbo-minerals. As for the efficacy, all the studies have shown positive effect in curing leucorrhea and all other parameters in some degree or other.

Table 4: Review of Clinical studies on Swetapradara (Leucorrohea)

Author's name	Sample Size	Parameters (Subjective & objective)	Drug	Method	Results
1	2	3	4	5	6
Poonam Choudhury et al (2014) [20]	2 groups 50 each	Vaginal smear, gam staining	Nimbadi Yoga varti & clingen vaginal suppository	Clinical Control group & drug group	Favourable impact in drug group A than control Group B Complete remission Group A 4% B 2% Markedly improved 78% 66%

AYUSHDHARA, 2024;11(2):150-161

		111001121111	0024,11(2).13	0 101	Moderately Improved 18%
					32%
More Sunil & More Manjula, (2014) [21]	30 drug & 15 Placebo	Clinical symptoms	Daruharidra churna with Durva (Cynodon dactylon) Swarasa	Clinical study- Drug group and placebo	Noticed marked changes in clinical parameters; effective and safe
Banari Das & Jayram Hazra, (2012) [22]	36	White discharge, per vagina, pruritus, cervical congestion, lower abdomen pain, low backache, dysurea, pain in external genitalia	Nagakesara churna, Godanti Bhasma in non- specific (Sweta Pradara)	Clinical Study	Cervical congestion, decrease in discharge, pruritus, and highly significant effect (p< 0.001)
Prasad G P et al (2012) [23]	72	Vaginal smear, white discharge per vagina, burning mitchuris,	Amlaka Guggulu, Trikshiri valkala kwath	External Vaginal douche	Good response 86%, 9% fair response improvements in white discharge 88.5%, congestion 81%, pruritus 86%, lower backache 86% and burning mituriyion 78%. Overall, highly significant (p<0.001) and ESR also
Omprakash et al (2012) [24]	30 Group A 15/ Group B 15	White discharge per vagina, Slesmala Srava, (mucoid and sticky secretion per vagina, Katisula, lower abdominal pain, Jangha Vedana, Sirosula, Kandu, Dourbhalya	Priyangvadi	Group A with Prakshalana B= Ghanavati 2gm 2 t/d	Significant improvement in subjective and objective parameters. The efficacy is more A than in B. Clinical improvement is 59% in A and 43% in B, In objective parameter weight is better in A than in B. Weight
Gatikrushn a Panda & Mahapatra KB (2011)	30	Pathogenic manifestation, white discharge, back ache, anemia, urinary tract infection.	Kukkutanda Twak Bhasma	Clinical trial	Pathogenic manifestation, Dourbhalya low back abdomen pain, White discharge, back ache, anemia, urinary tract infection.
Nayana P Patil et al (2010) ^[26]	30	Yoni kandu, Sitalata, Katisula, Udara sula, Arocaka (anorexia) Bhrama (giddiness) and objective parameters	Mayaphala & Dhataki pushpa	Single blind	Cardinal symptoms of Sweta srava (100 and Yonivedana 63% Yonikandu 86% Seetalata 60% and general symptoms katisula 100%, Udarasula 70%, Bhrama 70%, Arochaka 86% Dourbalya 96% and PIS: P/V findings: Cervicitis 13.3% cervical erosion 20% Complete cure 40%, 23% marked improvement and 30% unchanged.

Neelima A, Mahesh Dixit, K. Bharathi. Ayurvedic Perspective of Abnormal Vaginal Discharge

Anitha S	30	Clinical parameters and	Herbo- mineral	Clinical	Backache 73%, 2/3 good
(2010) [27]		conceptual	drug- <i>Kaseesadi</i> curna orally and <i>Dharana</i> topically	study,	response, 23% fair response and 13% did not respond.
Meenakshi Shukla et al (2009) ^[28]	30	Vata Karak	Dhatakyadi yoga and Lodhra Kwatha	Clinical – Uttarvasti, Kwatha	Kaphahara
K. Bharati & K. Gopal Kumar (2007) ^[29]	36	Non -specific Leucorrhoea	Karanja kwatha on non-specific leucorrhoea	Clinical, Vaginal douching	Reduction in white discharge and cervical congestion. Overall good response 13.3%, fair 43.3%, poor 26.6 and no response 16.6%. highly significant at (p<0.001)
Trollope- Kumar Kiren, (2006) [30]	_	Cultural and anthropological framework rather than biomedical framework.	Tropical medicines	Review study	In South Asia, problem could be better understood in cultural meanings (anthropological) than biomedical. There is unnecessary use of antibiotics in supposedly syndromic approach.
Sannd B S & Krishna Kumari B, (1992) [31]	64	White discharge, Katisula, Dourbalya, lower abdominal pain, Bhrama	Vatavalka curna	Clinical study	More impact on <i>Katisula</i> , white discharge, and moderately in <i>Dourbhalya</i> , lower abdomen pain, and constipation. More intensive studies are needed.
T. Sheshagiri Rao et al, (1985) [32]	31	Swetha, Picchila Srava, Katisula, Kandu	Amlaka Guggulu	Clinical study	Disappearance of Swetha, Pitchu srava, Katisula, Kandu; need more controlled studies
Koppula Hemadri, Aswahari & Sasibhusha n Rao (1983) [33]	Review	Leucorrhoea and Menorrhagia	11 folk medicines collected	Surveyed and collected information	Collected information of 11 folk lore medicines and documented showing favourable impact.
Solanki GH, Dei LP, Donga SP,	Clinical A 58 * B 48	Yoni srava, Kandu, Vaginitis	A= Nimbadi Yoga, B= Yoni prakshalana	Oral/ Prakshalana	Both are effective. A is more convenient than B.

Source: Compiled based on respective papers

Review of Clinical Studies with AVD as Symptom

Recent clinical studies are reviewed in respect of problem studied, sample size, drug, methods of drug dispensation, parameters used for estimation and the results. The symptoms of AVD include *Paripluta Yonivyapad* (Pelvic Inflammatory Disease (PID), *Upapluta Yonivyapad*, (vulvovaginosis during pregnancy), *Kaphaja yonivyapada* (candida albicans),

Yoni vyapad w.s.r. to PID, Sleshma Yonivyapad (vulvo-vaginal candidiasis (Table 5). The number of subjects covered in the studies varies from a single case study to 80 patients. The methods of drug administration are also varied, mostly Sthanika chikitsa – Yoni prakshalana (douching), Yoni varti, Yoni pichu, Yoni kalka, Yoni puran (intra vaginal insertion) etc. The

drugs used include *Chandraprabhavati*, *Shatavari pak*, *Dhatakyadi varti*, *Panchavalkala kwath* clingen vaginal suppository, *Phalashadi yoga*, *Shyamatrivantadi kalka*, *Brihati phala dwiharidra kalka* and *Triphala kwatha*. The tests include Wiff's test, wet mount vaginal smear etc. The reviewed clinical studies show positive significant results (at significant 'P' values) on AVD. At the level of complete relief, 1/3rd to 2/3rd subjects got

complete remission (at 100% relief), $1/3^{rd}$ to $2/3^{rd}$ marked relief (at >75% relief). Only, marginal per cent (2-3%) did not work at all. At individual parameters of AVD, significant results obtained at different ranges of relief in fungal infection, bacterial infection, pain alleviation (*Yonigat vedana*), vulval itching (*Yonigat kandu*) abdominal pain, pus cells, colour, odour, local tenderness and discharge consistency.

Table 5: Review of Ayurvedic Clinical Studies on Diseases with the Symptom of AVD

Author/Year	Problem	Sample size. Method of treatment	Drug used	Results
Shaik NM, Lakshmi priya Dei & Donga S 2016 (R22) [35]	Upapluta Yonivyapad /vulvo vaginitis during pregnancy	80 patients 19-40 years/ (A 46; B-34) Yoni varti & Prakshalana intravaginal insertion	Dhathakyadi varti and Clingen vaginal suppository	Highly significant relief (p<0.001) in fungal infection, Gram-negative bacterial infection (pus cells in A Group (<0.005). Gram negative bacteria 17.3% in A, & 50% in B; Pus cells 50.5 in A & 87.5 % in B. Complete remission 34.8% in A and 33.3% in B, marked improvement 34.8 in A and 10% in B and Remained unchanged 2.32 in A and 20% in B. Recurrence rate is low.
Bhattar P (2013) [36]	Kaphaja Yonivyapad w.s.r to candida albicans	10 patients (vagina smear)	Yoni Prakshalana with Panchavalkal kwath	60% totally cured from symptoms and mild improvement in the rest of patients.
Pinge CD, et al (2015) [37]	Kaphaj Yoni vyapad (Candida albicans)	Yoni puran	Shyamatrivrit- adi Kalka & Brihati phala dwiharidra kalka Yonipuran	Experimental group fared better than control group in <i>Kaphaja yonivyapad</i> . Overall Relief: Marked (>75%) 11.6%, moderate (50-75%) 41.6%, mild (25-50%) 40.0%.
Deepti Gudi G, Gayathri Bhat NV., (2021) ^[38]	Kaphaja Yoni Vyapad / Vulvo vaginal candidiasis	Douching/ Yoni Prakshalan	Pancha valkala Kwath	Total cure of <i>Pichhila Srava, Yoni kandu, & Vedana, Sheetasrava</i> (50%), and quantity of discharge 2/3 rd . Test conducted (Wiff's, Wet mount vaginal smear)
Karanjkar D M (2021 June) ^[39]	Yoni vyapad wsr to PID	80 patients (Agroup4 6; B group-34) Varti Intravaginal	A= Dhatakyadi varti B= Clingen vaginal suppository	Vaginal smear test: Group A fared better. Significant effect on <i>Yoni srava, Yoni kandu,</i> <i>Yoni vadana, Yoni deha, Yoni daurgandhya</i> In group A, 34,8 % complete remission, 34.8% moderate, while only 2.2 unchanged.
Gautham S et al (2021) [40]	Sleshma Yonivyapada (Vulvovagin al candidiasis)	Yoni pichu	Triphala Kwath Yoni prakshalana (7 days) followed by Dhatakyadi tail yoni pichu (7 days)	For <i>Srava</i> and <i>Kandu</i> P value significant at <0.0001. Significant relief in <i>Katishula</i> (56.25%), <i>Kandu</i> (56.25%), consistency of <i>Srava</i> (46.25%) and <i>Srava</i> association with pain, vaginal pH (56.25%), <i>Srava pramana</i> (56.25%).

Source: Own compilation based on respective studies on AVD.

DISCUSSION

Conceptually, all the gynaecological disorders including *Yonisrava*/AVD come under *Yoni vyapad* and *Artavadushti* in Ayurveda classics. Therefore, *Yoni vyapads*, which are created by *Kapha*, *Vata- Kapha*

dosa, are main causative factors of AVD. Ayurvedic Treatment of *Yonisrava* is mainly based on the use of drugs which are having predominance of *Kashaya rasa* and *Kapha Shamaka* property^[15] (Choudhary Sushila,

Sharma Sushila, 2018). Ayurveda mentions that "affliction of *Srotas* and its root is the primary point of assessment of each and every disease. Pathological assessment is only possible if *Srotodushti* is properly evaluated.

Avurvedic drugs are given in many dosage forms for more than twenty, such as simple juice, paste, decoction, powder, medicated oil, medicated ghee, tablet, pills etc. The formulation may be single or compound such as poly herbal, herbo-mineral or herbo-metallic. All these forms contain many active bio molecules and each molecule may have different functions. Any single herb having more than 1000 phytochemicals, a few may be more active having varied actions. Drugs prescribed in Ayurvedic practices are always advised to consume with some vehicles like water, hot water, milk, honey etc. Apart from this, a peculiar type of food is also advised to consume, and, some other times, is advised to avoid. The dietregimen, along with medicine, is usual in Ayurvedic There are some common chemical practice. constituents in majority of the plants may be alkaloids, saponin glucosides. cardenolides. glycosides. carbohydrates, fixed oils, fats and volatile oils, minerals and metals, and hence, evaluation should be comprehensive.

A unique feature of Ayurveda is individual approach based on *Prakrit* of an individual. This was underlined by Acharya Caraka 4000 years ago as 'Every individual is different from another and hence, should be considered as a different entity'. Acharya Carak mentions that diet should protect health and prevent onset of disease. Food exercises a tremendous influence on the mind and temperament of the individual. Ayurveda gives great importance to *Pathya* (congenial diet)/ *Apathya* (non-congenial diet) and the treatment of the disease.

Clinical studies, reviewed here amply show a promise of managing many components of AVD such as reproductive tract infections, sexually transmitted infections, Swetapradara (leucorrhoea), Paripluta Yoni vyapad (Candida albicans), Sleshmala Yoni vyapad (Vulvovaginal candidiasis), Upapluta Yoni vyapad (vulvovaginitis during pregnancy).

Further, the study shows that there are wide varieties of drugs being used to treat the diseases with symptom of AVD that include *Shatahvadi yogam, Phalashadi yoga, Nimbadi Ghanavati, Dhatakyadi varti, Thriphala kwata, Shyama trivrutadi kalka, Bhrihati phala Dwihridra kalka, Panchvalkala kwath* etc. In the case of *Shwetapradara*, innumerable Ayurvedic drugs are being used effectively. Prominent among them are *Nagakesara churna, Godanti Bhasma, Trikshirivalkala*

kwath, Priyang vadi vati, Kukkutanda twak Bhasma, Mayaphala, Dhataki pushpa, Karanja kwath, Vatavalka Churna, Amlaka, Guggulu and Nimbadi yoga and many others.

The drugs gave significant results at the levels of total cure ranging from about 1/3rd to 2/3rd in various studies. The drug effect on individual AVD complaints like Yoni srava. Yoni kandu, Yoni vedana. daurgandhya, Kati shoola, Udara shoola, consistency, odour and colour, vulval itching, back ache in different ranges, local tenderness, has been significant. The most popular statistical tool applied is the 'P' value. While there are innumerable simple methods of drug administration, there are a few complicated and risky procedures. Some of the studies have evaluated the results in terms of objective criteria based on laboratory tests. In many cases, they were significantly positive, though some were not significantly positive. The experience - based Ayuvedic study results are positive, however, they need further standardization for mass application

CONCLUSION

The review study of AVD in the Ayurvedic perspective reveals the conceptual framework of AVD as available from Ayurved classics of Carak, Susruth and others. Though, it is not fully akin to AVD of modern type, most of the symptoms of AVD are covered under Yoni vayapad and Artavadushti in Ayurved. Individual AVD complaints include Yoni srava, Yoni kandu, Yoni vedana, Yoni daurgandhya, Katishoola, Uttara shoola, consistency, odour and colour, vulval itching, back ache in different ranges, local tenderness etc. It has explained the underlying causes of AVD, methods of diagnosis of AVD, drugs to be used in the management of AVD and methods for application of drugs. The results of clinical studies reviewed here, indicate significant 'p' values for overall remission or individual symptoms of AVD, offering great potential of different Ayurveda drugs for effective treatment of AVD which needs to be harnessed for health and well -being of women. There is a need to create a repository of such Ayurvedic evidence and standardized for mass use.

The study has implications for reorientation in the approach to public health policy of including Ayurvedic treatment of AVD in the public domain and may be added to RTI (including STI) guidelines that are already in vogue in India since 2007. For this, the existing Ayurvedic treatment practices need to be standardized through broad -based clinical trials in different geographical settings and standards of procedures (SOP) may be established for bulk use.

REFERENCES

- 1. Unemom, Lahra MM, Escher M, Eremin S, Cole MJ, Galarza P, Ndowa F, Martin I, Dillon J R, Galas M, Ramon -Pardo P, Weinstock H, Wi T, WHO Global anti-microbial resistance surveillance (GASP/ GLASS) for Neisseria gonorrhoeae 2017-18: a restrospective observational study, Lancet Microbe 2021: 2: e627-
- Aseema Malhotra (2018), Why modern medicine is a 2. major threat to public health, NHS, Thu. Aug 2018
- National Health Services (UK), www.nhs.uk/ conditions/contraception/combinedcontraception.pill
- World Health Organisation (WHO). (2002).Traditional Medicine Strategy Report. Document WHO/EDM/TRH/2002.1 4a) https://www.who. int/news-room/fact-sheets/detail/antimicrobialresistance 21 November 2023
- Usha Kataria, Smitha Siwach, Dinesh Chillar (2015), Study of the causes of VD among sexually active females in age group of 20-45 years - A hospitalbased study in BPS Government Medical College for women, Kahnpur kalan, District Sonipat, Haryana, India International Archives of Integrated medicine Vol 2 Issue 4, April 2015. Available online at " www.jaimjournal.com
- Sood Nishi, Shyamsundar Sud., (2018), Profile of infection in women with vaginal discharge in North India; International Journal of Reproduction, contraception, Obstetrics and Gynecology, Oct 7(100;4184-4189. (www.ijrcog.org)
- Uwakwe K A., Iwu AC., Obionu CN., Duru CB, Obiajuru, 21. More Sunil & More Manjula, (2014), 'Effect of Madubueze UC., (2018), 'Prevalence, Pattren and predictors of Abnormal Vaginal Discharge among women attending Health care Institutions in IMO State, Nigeria, Journal of Community medicine and Primary Health care, 30 (2) 22-35.
- Seth Akshita, R., Chaitra S. Vaishnav, Sharatchandra G R, (2017), 'Prevalence of bacterial vaginosis Females in the Reprocuctive Age group in Kdur, Karnataka, India,' Int. J. Reprod Contracep Obste Gynecol, Nov 6(1), 4863-4865
- Thakur J Kriplani, Agarwal N, Vishnubhatla S., Atiology and risk factors of recurrent vaginitis and its association with various contraceptive method, Indian J. Med. Res 2010, 131(1): 83-7
- 10. Mahivnam P, Krupp K, Chandrashekharan et al Prevalence and correlates of BV among young women of Reproductive Age in Mysore, India, Indian Journal of Med. Microbiol 2008, April-Jume, 26(2), 132-137
- 11. Sharma A K., Rajam R, Mehta G, (2004)., Prevalence and determinants of Reproductive Tract infections among women, J. commun Dis, 20024, 36; 93-9 (Pub med) [Google scholar]
- 12. Rao P, Davi S, Shriyan A, Rajam M, Jagdish Chandra K., 2004) Diagnosis of bacterial vaginosis in a rural set

- up: Comparison of clinical algorithm, smear scoring and culture by semi-gauntitative technique. Indian I. med. Microbiol, 2004, 2247-50, (Pub Med [Google Scholarl
- 13. Charak, Charak Samhita, Commentary by Kasinatha Sastry & Goraknatha Chaturvedi, (2009), Reprint) Chaukhamba Bharati Akademy, Varanasi.
- 14. Sushruta, Sushruta Samhita (Eng. Translation) by Srikantha Murthy KR. (2001), Chaukambha Orietalia, Varanasi
- 15. Choudhary Sushila and Sharma Sushila, (2018), 'Yonisrava in various vonivvapad and artava dushti with special reference to AVD'; International journal of Research in Ayurveda and Pharmacy; 2018; 9(4), 151-153.
- 16. Astanga Sangraha of Vagbhata, by Athridev Gupta (2011), Chaukhamba Krishnadas Academy. Varanasi.
- 17. Astanga Hrdayam of Vagbhata by Athridev Gupta (1993) 11th Edition, Chowkhamba Sanskrit Sanathan, Varanasi.
- 18. Kasyap, Kasyapa Samhita (Text with English translation) by PV Tewari, Chowkhamba Vishwabharathi, Varanasi.
- 19. Madhavakara, Madhava Nidanam (Text with English translation) by Prof. K R Srikantha Murthy Chaukhamba Orientalia Varanasi.
- 20. Poonam Choudhary, Lakshmi Priya Dei, Sushila Sharma, (2014), 'A RCT on the Efficacy of Nimbadi Yoni Varti on AVD in Reproductive Aged Women', Journal of Ayurveda and Holistic Medicine, 2(6), pp1-12
- Daruharidra (Berberisa aristate) curna with Durva Cyanodon dactylon) Swaras in Rakta pradara', International Journal of Ayurveda & Alternative Medicine, 2(3), pp36-41
- 22. Banari Das and Jayram Hazra, (2012), 'Efficacy of Nagakesara and Godanti Bhasma in Non-Specific Leucorrhoea (Swetap pradara)', Aryavaidyan 25(3), pp148-151
- 23. Prasad GP, K. Kusuma Kumari, SN Murthy, T. Maheshwari, AJV Sai Prasad, G K Swamy (2012), Role of Amlaki Guggulu and Trikshiri Valakala kvatha Yoni Prakshalana in the Treatment of Svethapradara, (Leucorrhea), JRAS Vol. XXXIII No. 1-4, Jan-Dec 2012 pp. 61-74
- 24. Omprakash Upadhyaya, Nisha Gupta, Mandavi Gautam, (2012), 'Role of Priyang vadi vati in the Management of Swata Pradara (Leucorrhoea) A Clinical and Conceptual Evaluation', Aryavaidyan, Nov 2011- January 2012, 25(2) pp. 84-88
- 25. Gatikrishna Panda, and K B Mahapatra, (2011), 'Clinical Effect of Kukkutanda Twak Bhasma in the Management of Swetapradara', Ayu, 32(3), pp370-374

- 26. Nayana P. Patil, Ashwini K R, Yogoni R, (2010), 'Efficacy of Mahaphala and Dhatakipushpa in the Management of Sweta pradara (Leucorrhoea), A Clinical Evaluation', Aryavaidyan, 23(4), 242-244,
- 27. Anitha S, Babu G, (2010), 'Role of some Hebo-Mineral drugs in the Management of Swetapradara', Presented at $4^{\rm th}$ WAC, Bangalore, 2010
- 28. Meenakshi Shukla, Ashutosh Tiwari, Sushila Sharma, (2009), 'Dhatakyadi Yoga and Lodhra Kwata Uttervasti in Leucorrhoea'. (No full Paper) Aryavaidyan 2009, 23 (2), 85-91.
- 29. Bharathi K & Gopal Kumar K (2007), 'Vaginal Douching with Karanja kwath in Non -Specific Leucorrhoea: A Clinical Evaluation'. Aryavaidyan, 20(3) pp 167-172
- 30. Trollope-Kumar Kiren, (2006), 'Cultural and Biomedical Meanings in South Asian Women', Tropical Medicine & International Health, 6(4) pp260-266
- 31. Sannd, Whiff (amine) B S & Kusum Kumari, (1982), 'A Preliminary Clinical Trial of Vatavalka curna on Swetapradara', Journal of Research in Ayurved & Siddha; 13(1-2) pp82-84
- 32. T. Sheshagiri Rao, K. Kusuma Kumari, B Netaji, J P Subhakta (1985), 'A Pilot Survey of Sweta Pradara (Leucorrhoea) with Amlaka Guggulu; Journal of Research in Ayurveda and Siddha, 6(2) pp 213-237.
- 33. Koppula Hemadri Aswhari & Sasibhushan Rao, (1983), 'Leucorrhoea and Menorrhagia: Tribal medicine', Ancient Science of Life, 3(1) pp
- 34. Solanki GH, Dei LP, Donga SB, 'A Clinical study on Sweta Pradara, (Leucorrhoea) and Its Management with Nimbadi Yoga'; Ayurpharm.: Int. J. Ayur Alli Sci. 2019; 8(9):123-133

- 35. Shaikh NM, Dei L, Donga S., (2016, April, June), Dhatakyadi Varti An effective local treatment for Upapluta Yonivyapad (vulvovaginitis during pregnancy): A standard controlled randomized clinical trial, 37(2): 98–104. doi: 10.4103/ayu.AYU_54_15.
- 36. Bhattar, P., (2013, 25 May), A clinical study on effect of yoni prakshalan with panchavalkal kwath in the management of kaphaja yonivapada w.s.r. to candida albicans. Anc Sci Life 32 (Suppl 2): S26. doi: 10.4103/0257-7941.123840.
- 37. Pinge CD, Kulkarni CJ, Danga SK, Bende Yogita, Bombarde A, Khandekar A, (2015), 'A Comparative Study of Shyamatrivruttadi Kalka and Bruhatiphala-Dwiharidra Kalka Yonipuran in Kaphaja Yonivyapad', International Journal of medicine 6(2) 183-193
- 38. Deepti Gudi B & Gayathri Bhat Nv., (2021). Management of Kaphaja Yoni vvapada Pahnchvalikala kwath w.s.r. to Vulvovaginal candidiasis - A case Report', AYUDHARA may-June 8(3), 2021, 3261-69. (DOI: 10.47070/ ayushdharav613.708
- 39. Karanjkar D. M, Kongi D.H, (2021, June) Ayurvedic Management of Paripluta Yonivyapada with special reference to Pelvic inflammatory disease, International Journal of Current Research, Islampur; 13(6) DOI: https://doi.org/10.24941/jjcr.41661
- 40. Gautam S, Singh S, Mishra S., (2021, May 21) A study of triphalakwath, yoni prachhalana and dhatakyadi tail yoni pichu in the management of sleshmab yonivyapada (vulvovaginal candidiasis) WJPMR 7(8): P. 231-235.

Cite this article as:

Neelima A, Mahesh Dixit, K. Bharathi. Ayurvedic Perspective of Abnormal Vaginal Discharge. AYUSHDHARA, 2024;11(2):150-161. https://doi.org/10.47070/ayushdhara.v11i2.1516

Source of support: Nil, Conflict of interest: None Declared

*Address for correspondence Dr. Neelima A

Professor & Head, Department of Prasutitantra & Strirog, PGIA, DSR Rajasthan Ayurved University, Jodhpur, India.

Email: aspneelima@gmail.com

Disclaimer: AYUSHDHARA is solely owned by Mahadev Publications - A non-profit publications, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. AYUSHDHARA cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of AYUSHDHARA editor or editorial board members.