



AYURVEDA APPROACH IN THE MANAGEMENT OF TRICHOMONAL VAGINITIS WITH SPECIAL REFERENCE TO KAPHAJA YONIVYAPADA - A REVIEW

[Singh Neelam K¹](#), [Sengar Alok S²](#), [Khuntia Bipin B³](#)

¹MD (Ay.) Prasuti Tantra, Research Officer (Ay.), Regional Ayurveda research institute, Gwalior, M.P, CCRAS, Ministry of AYUSH, Govt. of India.

²MD (Ay.) Ayurved Samhita, Lecturer, Department of Samhita-Sidhanta, Bundelkhanda Govt. Ayurvedic Medical college, Jhansi, U.P,

³PhD. (Ay.), Principal, K.A.T.S Ayurvedic college & AMP; Hospital Berhampur, Odisha, 1365, C.P Mission compound, Gwalior Road, Jhansi (U.P), 284003

Corresponding Author: drsengar.neelam@gmail.com

<https://doi.org/10.46607/iamj2209052021>

(Published Online: May 2021)

Open Access

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Article Received:27/04/2021 - Peer Reviewed:05/05/2021 - Accepted for Publication:06/05/2021



ABSTRACT

Trichomonal vaginitis is a common sexually transmitted infection that can cause vaginitis, cervicitis and urethritis. Persistent and recurrent infections are frequent in women, potentially due to the lack of routine screening recommendations for this pathogen, chronic nature of some infections and drug resistance. Modern treatment involves the use of systemic and local antibiotics which create a number of inconveniences during their usage. There are few alternative treatment options for persons with a metronidazole allergy or treatment failure. Ayurveda provides many alternatives and can prove a boon to the ailing humanity not only by curing the disease but also by preventing their recurrences. In Ayurvedic texts, various conditions giving rise to white discharge per vaginum had been described. The signs and symptoms of *Shleshmala Yonivyapada* are more or less similar to Trichomonal vaginitis. In recent decades, numerous efforts have been made to select, extract, and find the mechanism of plant compounds against pathogens of sexually transmitted diseases. In this article, management of *Trichomonas* vaginitis reviewed through an Ayurvedic text is elaborated in detail.

Keywords Ayurveda, Kaphaja Yonivyapada, Trichomonal vaginitis, Yonistrava

INTRODUCTION

Trichomoniasis is one of the most common sexually transmitted infections (STIs) worldwide caused by a protozoa *Trichomonas vaginalis*.¹ *Trichomonas vaginalis* is the most common gynecological disorder. Abnormal vaginal discharges can occur in a number of conditions, including infections and imbalances in vaginal flora or Ph. In one study looking at women presenting to clinic with concerns about vaginal discharge or a foul smell in their vagina, it was found that 34% had bacterial vaginosis, 23% had candidiasis, 32% of patients were found to have sexually transmitted infections due to Trichomonal infection. When abnormal discharge associated with vulval itching and burning, it is called vaginitis.²

The most significant concern for the gynaecologist during treatment period of *Trichomonas vaginalis* is high rates of re-infection, chronic and persistent nature of infections, drug resistance and its side effects like nausea, vomiting, metallic taste of mouth, abdominal pain, vulval itching, constipation, rash, swelling of the tongue, dizziness, fatigue, and darkening of the urine. In addition, metronidazole and its metabolites are mutagenic in bacteria and chronic administration induced tumor formation in rats.³ There are few alternative treatment options for persons with a metronidazole allergy or treatment failure. It is associated with cervical neoplasia, infertility, Pelvic inflammatory disease (PID), adverse pregnancy outcome, postoperative infection and *Trichomonas vaginalis* infection increases the risk of HIV transmission in both men and women.⁴ Due to its high prevalence worldwide and the frequency of co-infection with other STIs make trichomoniasis is a compelling public health concern.

In Ayurvedic texts, various conditions giving rise to white discharge per vaginum has been described. The word *shwetpradar* (Leucorrhoea) has not appeared in great trios i.e. *Charaka*, *Sushruta* and *Vagbhata samhita*, commentator Chakrapani, *Sharangdhara samhita*, *Bhavprakash* and *Yogratnakara* have used

the word *Shwetpradar* for white discharge. A complaint of vaginal discharge very much depends upon woman's own perception, power of observation and tolerance etc., or it has great individual variation. All the signs and symptoms of *Shleshmala yonivyapada* are more or less similar to *Trichomonas Vaginitis*.⁵

Etiology

Shwetata (white colouration), coldness, stickiness symptoms are pertaining to *Kapha-prakopa* (accumulation).⁶ White discharge per vaginum is mainly due to disorders of *Kapha*. Qualities of *kaphadosha* are *Guru* (heavy), *Shita* (cold), *Mridu* (soft), *Snigdha* (unctuous), *Madhur* (sweet), *Sthira* (fixed) and *Picchila* (mucoid/slimy), so the diet agonist to these qualities can vitiate *Kapha*.⁷

Ailments related with *Kaphadosha* arises because of seasonal changes, excessive intake of *madhur*, *amla* (sour) and *lavana* (salty) *ahar*, dairy products, sleeping during day time and lack of exercise.⁸ *Rasa dhatu* and *kaphadosha* are in close relation, hence *rasa* disorders will also result in disorders of *Kapha*.⁹ *Kapha-prakopa* is always accompanied with either disorders of *vataadosha* or *pittadosha*, it vitiates the *Artava-vahasrotas* (genital system) and produces the symptoms of *Kaphaja Yonivyapada*.

Pathogenesis

Dosha – *Vata* and *kapha*, *Dushya* – *Rasa*, *Rakta* & *mansa*, *Srotasa* – *Rasavaha*, *raktavaha*, *artavavaha*, *Srotodustilakshan* – *Atipravriti*, *Adhistan* – *Yoni*, *Rogamarga* – *Abhyantara*, *Sthanasamsraya* – *Yonimarga* and *Garbhashaya*

Clinical features

Kapha vitiated due to excessive use of *abhisyandi* (articles producing oozing or serous effusion) substances reaches reproductive system and causes unctuousness, coldness, itching and dull pain in vagina. The woman looks anemic and discharges yellowish, unctuous menstrual blood is the opinion of *Caraka*.¹⁰ *Cakrapani* has equated this with *Kaphaj-*

asrgdara on the basis that yellowish discharges per vaginum are present during intermenstrual period also. *Susruta* has given only local symptoms as presence of unctuousness, itching and excessive coldness.¹¹ Both *vagbhata*s have followed the *acharya Caraka*, however have included painless and yellowish discoloration of vagina also.¹² Madhavanidana, Bhavaprakasha and Yogratnakara etc. have followed *Susruta*. Main characteristic features of this condition are presence of itching in vagina and unctuous discharges, which has a resemblance with trichomonal vaginitis.

Material and methods

All the relevant literatures including classical Ayurvedic texts with their commentaries and recent modern literature, journal, their electronic data base including Google scholar, PubMed, were referred and

reviewed. Literature related to the title was explored, rationality and evidence were studied, and conclusion has been drawn.

Observation

A vaginal discharge varies in its characteristics according to the *dosha-dushti* at its base. If one takes into consideration the type of discharge, whether it is *tanu*(watery), *picchil*, *styana* (thick/collected into mass) *avila-tantula* (mucopurulent) or *durgandhi pita* (offensive yellowish), it is easy to understand the underlying pathology. *Styana*, *avila-tantula* and *durgandhi pita* discharges denotes the *Kaphaprapakopa* in a stage of *samawastha*. When *Kaphaprapakopa* especially of its *picchil* and *snigdha* accompanied with *vataprapakopa* of its *chala guna* this *picchil* type of discharges occurs. (Table 1).

Table 1: Doshic involvement in various type of vaginal discharges ^[13]

Type of discharges	Dosha involvement
Tanu (watery)	Kapha, pitta(dravaguna)
Pichchila (Mucoid)	Kapha(pichchila&snigdha), Vata(chalaguna)
Styana (Thick curdy)	Kapha(sama)
Avila- Tantula (Muco-purulent)	Kapha(sama), vata
PeetaDurgandhi(purulent)	Kapha(sama), pitta

Table 2: Differentiation of condition by examining the discharge. ^[14]

<i>Tanu (watery)</i>	<i>Pichchila (Mucoid)</i>	<i>Styana (Thick curdy)</i>	<i>Avila- Tantula (Muco-purulent)</i>	<i>PeetaDurgandhi (purulent)</i>
<i>Soma roga</i>	<i>Kaphaja yonivyapada</i>	<i>Atyanandayonivyapada</i>	<i>Karniniyonivyapada</i>	<i>Raktagulma</i>
<i>Acharnayonivyapada</i>	<i>Upapluta yonivyapada</i>	<i>Kaphajayonikanda</i>	<i>Yoniarsha (Kaphaja)</i>	<i>Phiranga</i>
<i>Kaphajapandu</i>	<i>Aticharana yonivyapada</i>			<i>Upadamsha</i>
<i>Rajayakshma</i>	<i>Kaphajashotha</i>			
	<i>Amawata</i>			
	<i>Krumi</i>			
	<i>KaphajaPrameha</i>			

DISCUSSION

Ayurveda principle and approach

Vaginal discharge is a symptom found in various diseases. Hence the curative treatment for any type of vaginal discharge is to remove the underlying

diseases. The modern science also agrees that treatment of vaginal discharge varies with the cause. Foreign bodies must be removed, infection and neoplasm should be treated accordingly.

As discharges per vaginum especially white discharge is due to disordered *kapha*, the main aim would naturally be to bring *kapha* to normal state. For this various *kaphaghna* drugs are advised. These drugs should possess *ruksha* (dry) and *usna* (hot) qualities. Generally, the drugs used should have an action of decreasing *kleda*, diminishing *kapha* and absorbing water. Hence drugs of *katu*, *kasaya tikta rasa* are used.¹⁵ Various *Kaphaghna* drugs are used internally. While administering Various *Kaphaghna* drugs, the accompanying *dosha-dusti* and *dhatu-vaishmya* must be considered. When vaginal discharge accompanied with *pittadushti* then *arogyavardhini vati*, *pugakhanda* and *pushyanuga churna* are used and when it is associated with *vatadushti* and *dhatukshaya* then *pradarantak rasa* and *pradarilouha* will be useful. In the stage of *samakapha*, *Triphala guggul*, *Lodhrasava* and *chanderprabha vati* are used.¹⁶ Charak has described the use of *Rohitaka moola* (*Tecoma undulata*) *kalka* (Paste) along with water in *shwetpradar*.¹⁷

Kandughna mahakasaya (Anti- pruritic medicines) e.g. *Manjishtha* (*Rubia cardifolia*), *Haridrac* (*Curcuma longa*), *Daruharidra* (*Berberis aristata*) and *Karanj* (*Pongamia pinnata*) possess *Laghu*, *Ushna*, *Rooksha* and *Lekhan* properties. They decreased the *kapha* and removes *kleda* which is main factor in Itching. Some medicines do cleanse and pacifying vitiated blood, which is the cause of Itching eg. *Chandan* (*Santalum album*), *Nimba* (*Azadirachta indica*), *Usheer* (*Vetiveria zizanioides*) and *Kutaja* (*Holarrhena antidysenterica*).¹⁸ These *mahakasaya* are useful in *kaphaj* and *uppluta yonivyapada*, *yonikandu* (vaginal itching) and in *shwetpradar*. *Vasti* of cow urine mixed with the drugs having predominantly *katu rasa* and *katu vipaka* properties should be given.¹⁹

Importance of *Sthanik-Chikitsha* (Local Treatment)

Varti (pessary/vaginal tablets), *pichu* (vaginal tampon) and *kalka* (paste) *kalpana* are employed for local action of drug. The various drugs used have healing, astringent and hygroscopic action. Selection of drugs depends on the type of *strava* (Vaginal

discharge), accompanying symptoms and pathology behind the condition.

The pessaries prepared with the following drugs should be placed in the vaginal canal for the treatment of *yonirogas* caused by vitiation of *shlesma*. Local vaginal application of paste of *shyama* (*Operculina Turpethum*) should be given. A pessary prepared with powdered *yava* (barley) or *masha* (a kind of bean) mixed with rock salt and pestered with latex of *arka* (*Calatropis procera*) should be placed either repeatedly or for a short time and should follow the irrigation of vaginal canal with lukewarm water. A vaginal pessary thick like index finger prepared with *pipali* (*Piper longum*), *marich* (*Piper nigrum*), *masha*, *satahwa* (*Anethum graveolens*), *kustha* (*Saussurea lappa*) and rock salt.²⁰ Vaginal tamponing with *Dhatkyadi* oil²¹ or *udumbaradi* oil will be useful.²² *Madhusaindhava pottali* is useful in *styana strava*. *Karanja* oil pichoo will be useful in severe itching.

In *styana* and *pichchil strava* vaginal douching with *triphala* decoction or *satala* decoction is useful. *Saurashtrijala* (Alum) or *dashmool* decoction or *triphala* decoction are useful in *avila- tantula strava*, while *Chandan* decoction or *lodhra* (*symplocusracemosa*) decoction used in *durgandhi-strava*.²³

Dhoom-chikitsa is used as a measure for local action. *Dhoom-chikitsa* has *srotoshodhana* (clears off passage), *kledghna*, *kaphaghna* (absorbs secretions) and *rakshoghna* (Bactericidal and Antiseptic) actions. It is used in all cases of *styana* and *pichchil strava*.²⁴ Commonly used drugs for medicinal fumigation are *dhattur-patra*, *ajamoda*, *shatapushpa*, *haridra* and *guggul*.

Vaginal discharges are mainly due to *Kaphadosha*, so methods like *dhooma*, *kshara* and *agnikarma* are also used to treat vaginal discharges.²⁵

Anti-Trichomonasvaginalis herbs/agents in Ayurveda

Curcumin- In vitro study conducted in 2000 showed that 21 synthetic monocarbonyl analogues of curcumin, untreated trophozoites, and metronidazole at 100 μ M, exhibited anti-T. vaginalis activity

comparable to metronidazole (no significant statistical difference). It was observed that three curcumin analogues (3a, 3e, and 5e) possess chemical features of interest which can be explored further as alternatives for the treatment of trichomoniasis.²⁶

Bola (Myrrh) and Dadima (Punicagranatum)- study conducted in 2011, in 33 metronidazole-resistant *T. vaginalis* females which were treated with a combined course of metronidazole and tinidazole. Those still resistant to the combined treatment were given *C. molmol*. Oleo-resin extract derived from Myrrh, *Commiphoramolmol* (Mirazid) was given as two capsules (600 mg) for six to eight successive days on an empty stomach two hours before breakfast. All patients were seen immediately after treatment completion and again 4 to 6 week later. Also, the plant extract purified from pomegranate (*Punicagranatum*) was in-vitro investigated for its efficacy against *T. vaginalis* on Diamond media. Extract was tested at different concentrations, diluted with sterile normal saline against cultured *T. vaginalis*. The anti-*T. vaginalis* activity of *P. granatum* and *C. molmol* showed promising results indicating to the sources of new anti-Trichomonas agents.²⁷

Peppermint (Mentha crispa)- Another Double blind randomized controlled clinical trial conducted in 2012, in this study total sixty female patient were randomized in treatment group, *M.crispa* (24mg as single dose) and in control group, Secnidazole (2 gm single dose). After treatment no difference in the proportion of patients was found between groups, adverse effects were significantly higher in Secnidazole group. It concluded that *M.crispa* is effective and safe alternative for the treatment of trichomonas vaginitis in women.²⁸

Garlic (Allium sativum)and Hinga (Ferulaasafetida) - study conducted in 2016, showed the Hydroalcoholic extract of *Ferula asafetida* at concentration of 0.5, 1 and 2 mg/ml killed 90% of the parasites in first hour of exposure and garlic extract at concentration of 0.1 mg/ml killed 95% of parasites after 2 hours. Moreover, garlic extract killed 90% of parasites at concentration of 0.05, 0.025 and 0.0125 mg/ml after 24 hours of

exposure even at low concentration. This study concluded that garlic and *ferula asafetida* have significant effect on *Trichomonas vaginalis*. 0.1 mg/mL of *A. sativum* extract caused destruction of 95% of *T. vaginalis* number in test tube after two-hour exposure with *T. vaginalis*.²⁹

Ginger (Zingiber Officinale) - another in vitro study conducted in 2016 to determine the effect of different concentrations of the ginger ethanol extract on the growth of *T.vaginalis* trophozoites. Three *T. vaginalis* isolates were cultured in a TYI-S-33 medium. The effect of ginger ethanol extracts and its toxicity in different concentrations (25, 50, 100, 200, 400, 800 µg/ml) on mouse macrophages were measured in triplicate exam by MTT [3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide] assay. The effect of ginger on apoptosis induction was determined by Flow cytometry. Study concluded that ginger Ethanol extract induces programmed death in *T. vaginalis*. It is recommended that due to the known teratogenic effect of metronidazole, ginger can be considered as an alternative drug for metronidazole. The disturbance in parasite due to the anti-parasitic activity of gingerol, shogaol, and hexahydro-curcumin, a constituent isolated from the roots of ginger which may have a direct effect on the vitality and viability of parasite.³⁰

Chandrashura (Nigellasativa)- Study in 2016 evaluated in vitro clinical efficacy of aqueous and alcoholic extracts as well as seeds oil of *nigella sativa* on the cultivated *T. vaginalis* trophozoites. Its effect on growth was compared with metronidazole under the same conditions. On comparison both the alcoholic extract and oil proved as efficient as metronidazole in treating *T. vaginalis* infection. The remarkable effect may be due to its essential oil (omega 3, 6, 9 & 7 fatty acids) present in the seed.³¹

Alkaloids

Several alkaloids, e.g., berberine, dibenzofurans, anthraquinones, polyacetylenes, saponins, and diterpenes have been analyzed as an alternative effective against *T. vaginalis*.³²

CONCLUSION

This paper concludes that, as till today, re-infection and drug resistance is most common challenge faced by gynecologist during treatment period of Trichomonal Vaginitis. This challenge can be easily overcome through Ayurveda. Trichomonal Vaginitis can be managed effectively with an Ayurvedic approach and its recurrences can be well prevented through Ayurveda.

REFERENCES

1. Van der Pol B. Trichomonasvaginalis infection the most prevalent nonviral sexually transmitted infection receives the least public health attention. *Clin Infect Dis.* 2007; 44(1):23-25.
2. E. S. Pavid. Genitourinary infection and sexually transmitted diseases. In: S. B. Jonathan, editors. Berek and Nork's Textbook of Gynaecology. 14thed. p. Lippincott Williams & Wilkins, Philadelphia, USA; 2007. pp.544
3. M. Mueller, J. G. Meingassner, W. A. Miller, and W. J. Ledger, "Three metronidazole-resistant strains of *Trichomonasvaginalis* from the United States," *American Journal of Obstetrics and Gynecology*, vol. 138, no. 7, pp. 808-812, 1980.
4. Soper D. Trichomoniasis: under control or undercontrolled?. *Am J Obstet Gynecol.* 2004 Jan. 190(1):281-90.
5. Prof (Km) P. V. Tewari, Prasutitantra and striroga, Part 2, Reprint ed., Chaukhamba Orientalia Varanasi,2005: 266-268.
6. 6.Agnivesh, Charak Samhita, Sutrasthana, Maharoga Adhyaya 20/18, Brahmanand Tripathi editor, Reprint ed. Chaukhamba Surbharti Prakashana, Varanasi, 2002; 244
7. Vagbhata, Asthang Hridaya, Sutrasthana, Doshabhediya Adhyaya 12/53, Atrideva Gupta editor, Seventh ed., Chaukhamba Sanskrita Sansthan Varanasi, 1980:94
8. Sushruta, Sushruta Samhita, Sutrasthana, Vranaprashana Adhyaya 21/23, G.D. Singhal editor, Second ed., Chaukhamba Sanskrita Pratisthan Delhi, 2007:196
9. Ibidem, Asthang Hridaya (7), Sutrasthana, Doshadivigyaniya Adhyaya 11/26;88
10. Agnivesh, Charaka Samhita, Chikitsasthana, Yonivyapadachikitsa Adhyaya, Vol 5, 30/13-14. Sharma RK, Dash B editors, Reprint ed., Chowkhamba Sanskrit Series Office Varanasi, 2015:132
11. Ibidem, Sushruta Samhita (8), Vol.9, Uttartantra, Yonivyapadapratishedha Adhyaya38/17;267
12. Ibidem, Asthang Hridaya (7), Uttartsthana, Guhyarogavigyaniya Adhyaya 33/44;569
13. Nirmala G. Joshi: Ayurvedic concepts in Gynaecology. 2nd ed. Chaukhambha Sanskrit Pratisthan Varanasi, 2000:123
14. Ibidem, Ayurvedic concepts in Gynaecology (13), Vaginal discharges 9;124
15. Ibidem, Asthang Hridaya (7), Sutrasthana, Doshabhediya Adhyaya 12/21;91
16. Ibidem, Ayurvedic concepts in Gynaecology (13), Vaginal discharges 9;126
17. Ibidem, Charaka Samhita (10), Chikitsasthana, Yonivyapadachikitsa Adhyaya, Vol 5, 30/116-117;159
18. Ibidem, Charaka Samhita (6), Sutrasthana, shadavirechanashatasritiya Adhyaya, 4/14;53
19. Ibidem, Charaka Samhita (10), Chikitsasthana, Yonivyapadachikitsa Adhyaya, Vol 5, 30/85;151
20. Ibidem, Charaka Samhita (10), Chikitsasthana, Yonivyapadachikitsa Adhyaya, Vol 5, 30/70;148
21. Ibidem, Charaka Samhita (10), Chikitsasthana, Yonivyapadachikitsa Adhyaya, Vol 5, 30/78-81;150
22. Ibidem, Charaka Samhita (10), Chikitsasthana, Yonivyapadachikitsa Adhyaya, Vol 5, 30/73-78;149
23. Ibidem, Ayurvedic concepts in Gynaecology (13), Vaginal discharges 9;127
24. Ibidem, Asthang Hridaya (7), Sutrasthana, Doshauptkramaniya Adhyaya 13/12;97
25. Ibidem, Sushruta Samhita (8), Sutrasthana, ksharapakavidhi Adhyaya11/5;86
26. Carapina DS, Caroline P, Bruna S; Das N, Raquel N; Dié A, et al. Antiparasitic activity of synthetic curcuminmonocarbonyl analogues against *Trichomonasvaginalis*. *Biomedicine & pharmacotherapy Biomedecine & pharmacotherapie.* 2000; 111:367-377
27. [G M El-Sherbiny, E T el Sherbiny](#). The effect of commiphoramolmol (myrrh) in treatment of trichomoniasisvaginalis infection. *Iran Red Crescent Med J* 2011; 13(7):480-48630.
28. Moraes ME, et al. Efficacy of menthe crispa in the treatment of women with trichomonasvaginalis infection. *Arch Gynecol Obstet*2012;286(1):125-30
29. [Sarkari b.*, Tadayon h., Askarian sh., Farnia e., Askarianm.](#) In vitro anti-trichomonas activity of freulaassafoetida and garlic extracts. [J of gorgan](#)

- [university of medical sciences](#) fall 2009 ;11(31):13-17.
30. Mohsen A., Mahdi D, Zohre F.K., Mohsen T., Hossein H. Ginger (Zingiberofficinale) induces apoptosis in Trichomonas vaginalis in vitro. Int J Reprod Bio Med 2016;14(11): 691-698
31. Mona A. A., Mahmoud H.A.K. A., Hanan A. H Are the fatty acids responsible for the higher effect of oil and alcoholic extract of Nigella sativa over its aqueous extract on Trichomonas vaginalis trophozoites?. J Parasit Dis 2016; 40(1):22–31
32. Gehrig, S.; Efferth, T. Development of drug resistance in Trichomonas vaginalis and its overcoming with natural products. Open Bioact. Comp. J. 2009, 2, 21–28.

Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Neelam Singh et al: Ayurveda Approach In The Management Of Trichomonal Vaginitis With Special Reference To Kaphaja Yonivyapada - A Re-view. International Ayurvedic Medical Journal {online} 2021 {cited May, 2021} Available from: http://www.iamj.in/posts/images/upload/1076_1082.pdf