

REVIEW ARTICLE ON VAGINAL INFECTION ASSOCIATED WITH DIABETES

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ABSTRACT

Vulvo-vaginal infection includes vulval or vaginal itching with rashes, white discharge and may be associated with burning micturition. It is mainly caused by abnormal growth of fungus or bacteria. The female with diabetes mellitus (DM) are more prone to the fungal growth, which leads to infection. Most women have yeast organisms as part of their normal flora. An increased level of blood sugar in diabetes affects the entire body and also appears in the mucus of the vagina & vulva and yeast gets energy from sugar, so an environment that is moist with sugar, yeast may overgrow. People who don't keep good control of their blood sugar may develop complications related to the constantly high levels. When a review was taken of 45 patients of vaginal

infection, out of that 16 patients were diabetic i.e. approx. 35%. It is found that diabetic women's needed longer treatment than non-diabetic. Treatment includes *yonidhawan* with *Triphaka kwatha* and *yonipichu* & *Pratisaran* with *yashtimadhu ghrita*, which having good cleansing and healing property.

KEYWORDS: Diabetes, *Yonodhawan*, *Yonipichu*, *Yoni-pratisaran*.

INTRODUCTION

Vulvo-vaginal infection^[1] is very common in worldwide and its incidence has increased dramatically in last few decades. The female with diabetes mellitus (DM) are more prone to the fungal growth, which leads to infection.^[2] Approximately 75% of all women will have vaginal infection at least once and 40 – 50% of them will have recurrence.^[3] Diabetes is

proven pre-depositing factor for vaginal infection along with pregnancy, high oestrogen level, oral contraception, obesity, broad spectrum antibiotics use, drug addiction and unhygienic women. Symptomatic vaginal infection has been shown to be more prevalent in patient with diabetes than in general patients and is usually due to fungal infection i.e. mostly due to yeast.^[4] Vulvo-vaginal infection is most problematic in women with poorly controlled diabetes therefore management of these infection is more important. Vulvo-vaginal infection in diabetes women are more difficult to treat than that of non-diabetic women. Diabetic patients themselves are responsible for day to day management of their diabetes. Therefore, in this study, we used integrated therapy; as patients were allowed to continue their previous medication for diabetes.

Vulvo vaginal infection is classified by world health organization (WHO) as a pathological condition that is frequently sexually transmitted.^[5] These infection causes great discomfort interfering with sexual relationship and impairing work performance, that's why it is considered as worldwide public health problem. Vulvo-vaginal infection includes vulval itching, leucorrhoea, dyspareunia, dysuria, burning micturition and vulval erythema. So, the goal of this study is to review vaginal infection associated with diabetes.

AIM

The aim of this study is to describe the incidence of vulvovaginal infection in diabetic and non-diabetic females on OPD and IPD basis of *streerog & prasutitantra* department, RA Podar Hospital, Mumbai.

MATERIAL AND METHODS

In this retrospective study, data is collected from OPD and IPD of *streerog & prasutitantra* department of RA Podar Hospital, Mumbai. In our institute, 45 patients were studied for evaluation. This study involves women aged between 18 to 50 yrs of age. Patients includes in this study were non pregnant women's and has not received any antibiotics or antifungal treatment in preceding two weeks, but patient were allowed to continue their previous anti-diabetic medicines.

Total number of patients with vulvo-vaginal infection taken under study was 45 and out of them diabetic females were 16 i.e. approximately 35%. Also, the severity of symptoms was more in diabetic females.

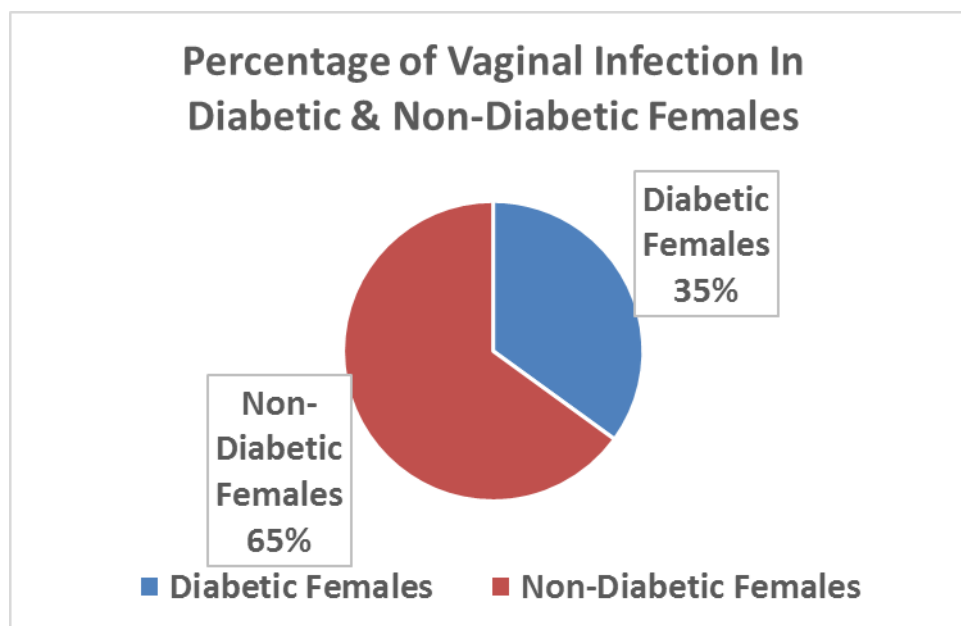


Figure-1

Pathogenesis

Normal vagina is lined by stratified squamous epithelium.^[6] The hormonal influence of oestrogen leads to increased glycogen in the vaginal epithelium. The glycogen is metabolized to lactic acid by *Lactobacillus acidophilus*, promoting an acid environment in the normal vagina which is unfavourable for the growth of most of pathogenic organism. An average number of organisms present in normal vaginal secretions are 10^8 to 10^9 /ml. In diabetes, an increased level of blood sugar affects the entire body and also appears in the mucosa of vagina, which alternatively decreases acidic medium. So, yeast like organisms get energy from that glucose and may overgrow i.e. the environment moist with sugar is favourable for various fungal or bacterial infection of vagina.

Table 1: Diagnostic criteria for vaginal infection.^[7]

SIGN	NORMAL	YEAST	TRICHOMONIASIS	BACTERIAL
Discharge color	Clear, white	white	Yellow	White/grey
Consistency	Non-homogenous	clumped	Frothy, watery	Homogeneous coats vaginal mucosa
Inflammation	None	common	Common with cervical petechiae	None
PH	<4.5	≥ 4.5	≥ 4.5	>4.5

Also, hyperglycaemia inhibits neutrophilic function.^[8] It decreases oxidative killing of organism by neutrophils. This is also reason due to which diabetic women are more prone to vulvo-vaginal infection.

Treatment

- 1) **Yonidhavan** – It is done with *triphala*^[9] is from *mustadi gana*^[10] of sushruta which has property of curing disease related to vagina, cervical canal, uterus i.e. *Tryavarta yoni*.^[11] *Triphala kwath* has anti-inflammatory^[15], antiviral & antibacterial^[16], antioxidant activities.^[12] Also improves circulation and possesses astringent property.^[17] Also it has *krimighna*^[18] and *vranaropan*^[19] property.
- 2) **Yashtimadhu Ghrita** – Acharya sushruta advised *yashtimadhu ghrita* in *agantuj vrana*¹³ to reduced increased heat and for tissue granulation formation. It is *sheet* in property, thus reduces localized inflammation. The lipophilic nature of *ghrita*^[20] facilitate entry of formulation into the cells. Its absorption is 95% which is highest of all other oil and fat products. *Yashtimadhu*^[14] itself have a *vranaropan* and *dahashaman* property. Also oil base medicine decreases the rate of fungal growth.^[15] Therefore, we used *yashtimadhu ghrita yonipichu* after *triphala kwath yonidhawan* and *yashtimadhu ghrita pratisaran* over vulval region.

During treatment we also observed that-

- 1) Diabetic females are more prone infection.
- 2) Good control of diabetes is essential to control vulvo-vaginal infection.
- 3) Diabetic females needed longer treatment than non-diabetic.
- 4) Rate of recurrence is also more in diabetic females than in non-diabetic.

DISCUSSION

Mumbai is metro city where R.A Podar hospital is situated centrally. Day to day patients visiting to OPD and IPD are mostly due to *santarpanjanya rogas & Anup desha*. We also observed that they are mostly from poor to middle socio economic group and some are illiterate. While taking history and after examine of patients it was observe that this patients is not aware about their local hygiene. We also observe that most of females with vaginal infection are also associated with skin infection, mostly due to fungal infection. So, as a need, we gave treatment i.e. *yonidhawan* with *triphala kwath* and *yonipichu* and *pratisaran* of *yashtimadhu ghrita*.

CONCLUSION

Vulvo vaginal infection is associated with many complications for both partners as it is sexually transmitted. Also day to day activities get affected due to symptoms like vulval

itching, white discharge. Some female also complains of psychological disturbance due to such symptoms.

REFERENCES

1. Infection of pelvic organs- Vagina, by D.C. Dutta's textbook of Gynaecology, Edited by Dr. Hiralal Konar, 6TH Edition, 2012; Pg. No- 156-159.
2. Vulvovaginal candidiasis and its related factors in diabetic women- by Dr. Ozra Tabatabaei Malazy, Taiwan, Obstetrics & Gynaecology, December 2007; Vol 46: Pg.No. 4.
3. Textbook of Modern Gynaecology, By Dr. Ajit Virkud, 3rd Edition, 2017; Pg. N. 55.
4. Textbook of Modern Gynaecology, By Dr. Ajit Virkud, 3rd Edition, 2017; Pg. N. 55.
5. Textbook of Modern Gynaecology, By Dr. Ajit Virkud, 3rd Edition, 2017; Pg. N. 57.
6. Internal genital organs- Vagina, by D.C. Dutta's textbook of Gynaecology, Edited by Dr. Hiralal Konar, 6TH Edition, 2012; Pg. No- 4-5.
7. Infection of pelvic organs- Vagina, by D.C. Dutta's textbook of Gynaecology, Edited by Dr. Hiralal Konar, 6TH Edition, 2012; Pg. No- 160.
8. Research Article on 'Hyperglycaemia Inhibits Complement-Mediated Immunological Control of *S. aureus* in a Rat Model of Peritonitis' by Dr. Clifford Maurillo et.al, Journal of Diabetes Research Volume 2014 (2014), Article ID 762051.
9. Sharangdhar Samhita, Madhyam khand, Adhyaya 6/9-10, by Dr. Shailaja Shrivastav, Chaukhamba Orientalia, Varanasi- 2011; Pg.No. 174.
10. Sushrut Samhita, Sutrathana 38/54-55, by Dr. Ambikadatta Shastri, Chaukhamba Sanskrit sansthan, Varanasi- 2012; Pg. No. 187.
11. Sushrut Samhita, Sharirsathana 5/55, by Dr. Ambikadatta Shastri, Chaukhamba Sanskrit sansthan, Varanasi- 2012; Pg. No. 65.
12. Article on 'efficacy of triphala kwath yoni dhawan with triphala siddha ghrta pratisaran in episiotomy wound' by Dr. Dhanashri Mahajan et al, IJRAP, April 2013.
13. Sushrut Samhita, Chikitsasathana 2/5-6, by Dr. Ambikadatta Shastri, Chaukhamba Sanskrit sansthan, Varanasi- 2012; Pg. No.18.
14. Bhavprakash Nighntu, Purvakhanda 145-146.
15. John Anne – American Chronicle, Triphala and Benefits of Triphala Herb 2007 (<http://www.americanchronicle.com/articles/view/28433> accessed on 14.12.12)
16. Triphala—an Ayurvedic Formulation, Evidence Based Complement Alternative Medicine. 2008 March; 5(1): Published online 2007 p 107–11.

17. Acharya Sushruta – Nibandhasangraha Commentary by Yadavji Triakumji Acharya & Narayanji Acharya, Sutra Stahana 46/200, Edition 5th, Chaukhamba Publication, 1992; p 229.
18. Vagbhata - Ashtanga Hridaya sarvanga Sundara Commentary of Arundatta & Ayurved Rasayana of Hemadri, collated by Dr. Anna Moreswar Kunte & Krishna Ramchandradra Sastri Navre, Edited by Pandit Harisastri Paradkar Vaidya. SutraSthan 6/159, Chaukhamba Sanskrit Series, Edition 1st, 1995; p 118.
19. Kashyapa Samhita, Sanskrit introduction by Pandit Hemraj Sharma, Hindi commentary by Bhaisagacharya, Chikitsa Stahana, Dwivraniya Chikitsadhyaya, 14, Chaukhambha Publication, 2006; p 125.
20. Ashtanga Hridaya, Sutrasthana 5/37-40, Pg.No. 74, by Dr. Ravidatta Tripathi, 2014.