

Original Research

Assessment of correlation of colposcopic and microbiological in patients with vaginal infections

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ABSTRACT:

Background: One of the most common conditions patients see gynecologists for is genitourinary tract infections. The present study was conducted to assess the correlation of colposcopic and microbiological in patients with vaginal infections.

Materials & Methods: 75 married women of reproductive age group were enrolled. A per speculum examination and the collection of vaginal discharge samples was done. The patients then underwent colposcopy, which was followed by a microbiological study of the vaginal discharge. **Results:** Common symptoms were burning in 43, frequency in 21, dysuria in 26, foul smell in 11, vaginal discharge in 13 and backache in 6 patients. The difference was non-significant ($P > 0.05$). Out of 30 cases of normal vaginal flora, colposcopic findings were normal in 22, cervical polyp in 3, chronic cervicitis in 2, vaginal hyperemia in 1, vaginal warts in 1 and mosaics in 1 case. Out of 15 bacterial vaginosis cases, 5 had vaginal hyperemia. Out of 12 cases of candida albicans, 3 had vaginal hyperemia. Out of 6 cases of Trichomonas vaginalis, 2 had chronic cervicitis. Out of 7 cases of BV+T, vaginal warts and mosaics was seen in 2 each. Out of 5 cases of BV+C, 2 had chronic cervicitis. **Conclusion:** Abnormal colposcopic findings in the form of vaginal hyperaemia, chronic cervicitis and keratosis were most commonly seen in women with vaginal infections.

Keywords: colposcopic, vaginal infections, vaginal hyperaemia

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INTRODUCTION

One of the most common conditions patients see gynecologists for is genitourinary tract infections. Over 50% of women report recurrent symptoms after experiencing vaginitis at least once in their lifetime.¹ In addition to being incredibly common, vaginal infections cause a great deal of agony for those who have them. Certain vaginal infections can increase a woman's risk of developing upper genital tract infections and problems from a co-existing pregnancy. Most of the time, a thorough history, a methodical examination of the vulva, vagina, and cervix, and a microscopic analysis of the discharge allow one to determine the cause and select the best course of treatment.^{2,3}

Colposcopy is a technique that uses an external light source to magnify an examination of the cervix,

vagina, and vulva. Typically, magnifications range from 6x to 20x. There are two ways to conduct the examination: the procedure using salt and the extended or classical approach.^{4,5}

Vaginal colposcopy is a laborious and time-consuming procedure. When interpreting vaginal lesions that appear abnormal on a colposcopic examination, Lugol's iodine is invaluable. The epithelium of the vagina is squamous and pink in hue.⁶ Compared to the cervix, the vagina's connective tissue is more vascular and flexible. The terminal capillary network in the stroma is seen at high magnification.^{7,8} The present study was conducted to assess the correlation of colposcopic and microbiological in patients with vaginal infections.

MATERIALS & METHODS

The present study consisted of 75 married women of reproductive age group. All gave their written consent to participate in the study.

Data such as name, age, etc. was recorded. A thorough medical and surgical history was obtained, together with information on the partner and the last menstrual cycle, obstetric history, previous childbirth,

type of contraception used, hormonal supplements, and other relevant details. A per speculum examination and the collection of vaginal discharge samples was done. The patients then underwent colposcopy, which was followed by a microbiological study of the vaginal discharge. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Assessment of symptoms

Symptoms	Number	P value
Burning	43	0.17
Frequency	21	
Dysuria	26	
Foul smell	11	
Vaginal discharge	13	
Backache	6	

Table I shows that common symptoms were burning in 43, frequency in 21, dysuria in 26, foul smell in 11, vaginal discharge in 13 and backache in 6 patients. The difference was non-significant ($P > 0.05$).

Graph I Assessment of symptoms

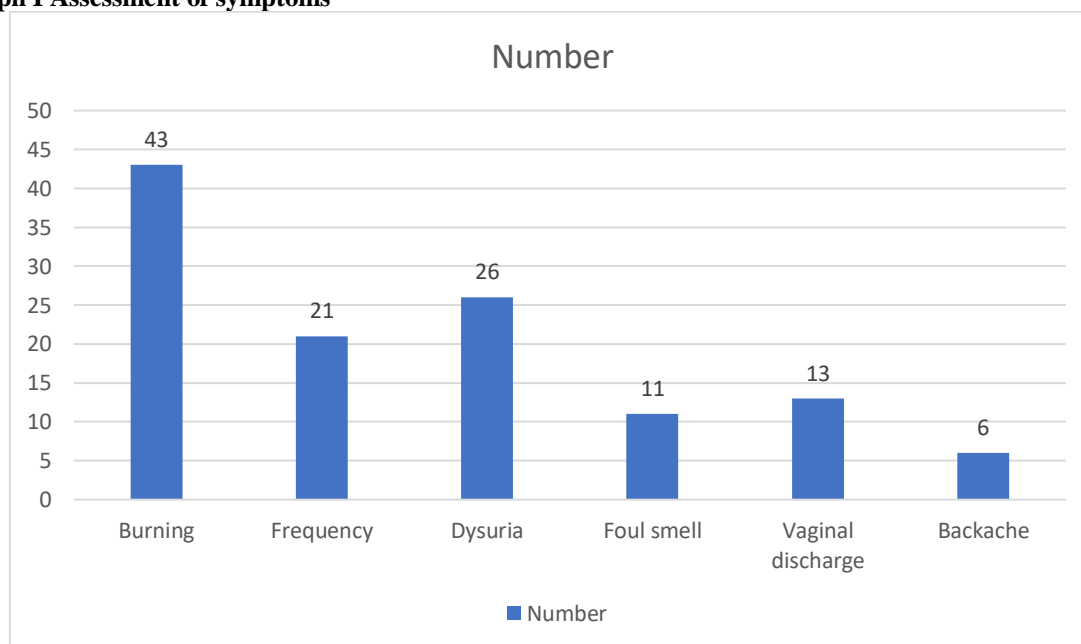


Table II Colposcopic findings in patients with normal and abnormal vaginal flora

Colposcopic findings	Normal vaginal Flora (30)	Bacterial Vaginosis (BV) (15)	Candida Albicans (C) (12)	Trichomonas Vaginalis (T) (6)	(BV+T) (7)	(BV+C) (5)
Normal	22	4	2	0	1	1
Cervical polyp	3	1	2	1	0	0
Chronic cervicitis	2	1	1	2	1	2
Vaginal hyperemia	1	5	3	1	1	1
Vaginal warts	1	2	2	1	2	0
Mosaics	1	2	2	1	2	1

Table II, graph I show that out of 30 cases of normal vaginal flora, colposcopic findings were normal in 22, cervical polyp in 3, chronic cervicitis in 2, vaginal hyperemia in 1, vaginal warts in 1 and mosaics in 1 case. Out of 15 bacterial vaginosis cases, 5 had vaginal hyperemia. Out of 12 cases of candida albicans, 3 had vaginal

hyperemia. Out of 6 cases of *Trichomonas vaginalis*, 2 had chronic cervicitis. Out of 7 cases of BV+T, vaginal warts and mosaics was seen in 2 each. Out of 5 cases of BV+C, 2 had chronic cervicitis.

DISCUSSION

Vaginitis is significant cause of vaginal discharge and this highlights the importance of various microbiological investigations to find out the causative organisms for vaginal discharge, so that the specific findings can be correlated colposcopically and more specific treatment can be given accordingly.^{9,10} The present study was conducted to assess the correlation of colposcopic and microbiological in patients with vaginal infections.

We found that common symptoms were burning in 43, frequency in 21, dysuria in 26, foul smell in 11, vaginal discharge in 13 and backache in 6 patients. Xueqiang et al¹¹ examined the prevalence rates and risk factors for reproductive tract infections (RTIs) among married women of reproductive age. All subjects underwent clinical and microbiological tests and an interview in the form of a standardized questionnaire. The prevalences of trichomoniasis, bacterial vaginosis (BV), and candidiasis as diagnosed by clinical tests were 2.8, 5.9, and 3.1%, respectively. The infection rates of *Trichomonas*, BV, and *Candida* were 2.9, 6.6, and 3.9%, respectively. The infection rates of gonorrhea and syphilis were low and no cases of HIV infection were found. After adjustment for confounding factors the risk factors for trichomoniasis were income higher than \$200, lack of knowledge about sexually transmitted diseases, and marriage to businessmen. For candidiasis the risk factors were three or more abortions, income higher than \$200, age of 30-39 years, and women with extramarital sex partner(s). For BV the risk factors were three or more abortions and age of 30-39 years. The prevalence of RTI/sexually transmitted infection (STI) and the risk behavior observed in this study indicate a need for primary programs to prevent the increase of RTI/STI and HIV infections in rural areas.

We found that out of 30 cases of normal vaginal flora, colposcopic findings were normal in 22, cervical polyp in 3, chronic cervicitis in 2, vaginal hyperemia in 1, vaginal warts in 1 and mosaics in 1 case. Out of 15 bacterial vaginosis cases, 5 had vaginal hyperemia. Out of 12 cases of *Candida albicans*, 3 had vaginal hyperemia. Out of 6 cases of *Trichomonas vaginalis*, 2 had chronic cervicitis. Out of 7 cases of BV+T, vaginal warts and mosaics was seen in 2 each. Out of 5 cases of BV+C, 2 had chronic cervicitis. Tchoudomirova et al¹² in their study two hundred and seventeen women who reported recurrent symptoms of dysuria, frequent micturition, and urgency and had a negative bacterial urine culture were recruited as cases. Seven hundred and ten culture-negative women lacking such symptoms served as controls. A careful record was made including details about gynecological symptoms, sexual behavior and genital hygiene practice. Gynecological signs were noted at gynecological examination. Genital infections,

including sexually transmitted diseases, were diagnosed. The mean age of the two groups studied was 26.2 and 25.8 years, respectively. Symptoms, such as dysmenorrhea, vaginal discharge, genital pruritus, abdominal pain and superficial dyspareunia were more frequent in the study group than among the controls. On examination, only erythema was observed more often. However, the cases more often had a history of genital herpes and vulvovaginal candidosis. They used tampons only for menstrual purposes, and soap for genital hygiene, but more often used low-pH solutions and took hot baths less frequently. The women with recurrent urinary symptoms more often masturbated and more often had experience of anal sex and sex during menstruation than the control group.

The limitation of the study is the small sample size.

CONCLUSION

Authors found that abnormal colposcopic findings in the form of vaginal hyperaemia, chronic cervicitis and keratosis were most commonly seen in women with vaginal infections.

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