Original Research Article

Diagnosis of vaginal discharge: Syndromic approach vs laboratory test comparative study

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Abstract

Background: In reproductive age most of the female encountered with the problem of vaginal discharge as it is a common problem faced by women. Syndromic approach for diagnosis of vaginal discharge is current practice of health provider but we need to know the exact etiology of vaginal discharge by simple laboratory test for the better treatment. **Objective:** To compare the diagnosis of vaginal discharge based on syndromic approach and laboratory tests. **Materials and Methods:** A cross sectional study was performed on 300 women of reproductive age group (15 -45 years) who gave written informed consent to participate in the study. Participant with symptomatic discharge came in Gynecology OPD of various hospitals of Indore city enrolled for study. They were diagnosed on the bases of WHO syndromic approach further the specimen send to laboratory for confirmative diagnosis. Women on oral contraceptives and those using IUD having severe health problems are not taken into study population. The data collected were analyzed through percentages and frequencies in which the data were presented in table formats, pie charts and histograms which were obtained using Excel and some using SPSS (Statistical Package for Social Science). The study was conducted during January 2016 to December 2016. **Results:** Among 300 women, In present study based on WHO syndromic approach bacterial vaginosis was most common diagnosis 64% followed by Indeterminate/Mixed 26% then candidiasis 06% lastly Trichomoniasis Less than 1% and diagnosis by laboratory showed bacterial vaginosis 38%, mixed 22%, candidiasis, Trichomoniasis Less than 1% and 32% nod determined **Conclusions:** WHO syndromic approach diagnosed bacterial vaginosis on higher side when be compare it with laboratory diagnosis while in case of candidiasis and trichomoniasissydromic approach results are quite satisfactory so we can conclude that syndromic approach has high sensitivity and specificity for candiadiasis and trichomoniasis but in case of bacterial vaginosis it has high sensitivity but low specificity

Key Words: Laboratory tests, syndromic approach, Vaginal discharge.

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INTRODUCTION

In routine practice of gynecology, vaginal discharge in very complaints by the patients. It may be physiological or pathological, there are many reasons for this complaint but due to ignorance of women it will lead to chronic infection which affects daily life of patient. Gynecological disorders have significant impact on female reproduction, mental health, physical health and also social health.[1] Syndromic management of these complaints was recommended by WHO, in which women complaining of discharge are treated for some or all of the five common reproductive tract infections: Chlamydia trachomatis infection, gonorrhea, and trichomoniasis, which are sexually transmitted infections and bacterial vaginosis and candidiasis, which result from disturbance in the normal bacterial flora of vagina.[2] Sexually transmitted infections (STIs) are among the most common causes of illness in the world and have far-reaching health, social and economic consequences for many countries. The emergence and spread of human immunodeficiency virus (HIV) infection and acquired

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immunodeficiency syndrome (AIDS) have had a major impact on the management and control of STIs. At the same time, resistance of several sexually transmitted pathogens to antimicrobial agents has increased, adding to therapeutic problems[3].

MATERIALS AND METHODS

A cross sectional study was performed on 300 women of reproductive age group (15 -45 years) who gave written informed consent to participate in the study. Participant with symptomatic discharge came in Gynecology OPD of various hospitals of Indore city enrolled for study. They were diagnosed on the bases of WHO syndromic approach further the specimen send to laboratory for confirmative diagnosis. Women on oral contraceptives and those using IUD having severe health problems are not taken into study population. The data collected were analyzed through percent-ages and frequencies in which the data were presented in table formats, pie charts and histograms which were obtained using Excel and some using SPSS (Statistical Package for Social Science). The study was conducted during January 2016 to December 2016.

RESULTS

Study conducted over 300 participants. Following are the findings of study.

Table 1: Education qualification of study participants

S.N.	Qualification	No. of participants	Percentage
1	Illiterate	13	4.33
2	High school	83	27.66
3	Higher secondary	105	35
4	Graduate	58	19.33
5	Post graduate	41	13.66

Most of the participants are literate high school and above.

Table 2: Age distribution of study participants

Sr. No.	Qualification	No. of participants	Percentage
1	15-25	35	11.66
2	26-35	176	58.66
3	36-45	89	29.66

Almost 60 % participants are in age group of 26-35.

Table 3: Diagnosis of vaginal discharge based on syndromic approach (WHO)

S.N.	WHO Syndromic Diagnosis	No. of participants	Percentage
1	Bacterial vaginosis	192	64
2	Candidiasis	18	06
3	Trichomoniasis	2	0.66
4	Indeterminate/Mixed	78	26

Bacterial vaginosis is most common diagnosis in syndromic approach.

Table 4: laboratory diagnosis of vaginal discharge

S.N.	Laboratory Diagnosis	No. of participants	Percentage
1	Bacterial vaginosis	115	38.3
2	Candidiasis	22	7.33
3	Trichomoniasis	2	0.66
4	Indeterminate/Mixed	65	21.66
5	Not determined	96	32

In comparison with syndromic approach significant difference was observed in laboratory diagnosis of bacterial vaginosis diagnosis. p value less than 0.05

DISCUSSION

Present study findings suggested that out of 300 women majority of cases were observed in age group 26-35 which is most sexually active age group. As far as diagnosis of vaginal discharge bacterial vaginosis was the most common diagnosis in the study participant. this finding is in line with the various study conducted globally.[3-4] When we compare the results based on syndromic approach and laboratory weobserverd that bacterial vaginosis was most common etiology for vaginal discharge around 64 % while in laboratory diagnosis it is 38 %. Similarly in study by Pettifor *et al* showed that sensitivity of syndromic approach vary from 73% to 93%.[5] In case of candidiasis results are quite similar in both the diagnosis 6% in syndromic approach and 7% in laboratory diagnosis but it has significance in treatment opted by clinician In the study by Ray *et al*[6] also stated in vaginal discharge patients only 37.5% had a confirmed etiological diagnosis. This was similar to studies conducted by Ryan, C.A[7] and Nugent, R.P[8] which showed that in 12-54% of the patients complaining of vaginal discharge, diagnosis could not be reached using any of the diagnostic approaches. In present study based on WHO syndromic approach bacterial vaginosis was most common diagnosis 64% followed by Indeterminate/Mixed 26% then candidiasis 06% lastly Trichomoniasis Less than 1% and diagnosis by laboratory showed bacterial vaginosis 38%, mixed 22%, candidiasis, Trichomoniasis Less than 1% and 32% nod determined. Similarly I the study done by Karaca *et al*[9] that also showed mixed clinical infections 29% clinically another study by Rekha *et al*[10] find 47% clinically diagnosed bacterial vaginosis while only 24% laboratory confirmed cases. A study Landers *et al*[11] on trichomoniasis infection showed high sensitivity and specificity in clinical diagnosis of Trichomoniasis Based on these findings we conclude that clinical diagnosis is quite help full for candidiasis and Trichomoniasis but for bacterial vaginosis it is not quite sensitive and specific our study revealed that clinical diagnosis alone in vaginal discharge patient would be over diagnose bacterial vaginosisas the WHO syndromic approach has high sensitivity but low specificity. Ray K *et al*[6] also reported high sensitivity of

the syndromic approach for vaginal discharge syndrome, but the specificity of this method in diagnosing vaginal discharge was low. It leads to over treating them by unnecessary antibiotics.[2] For trichomoniasis and candidiasis, clinical diagnosis is reliable as it has high sensitivity and specificity.

CONCLUSION

WHO syndromic approach diagnosed bacterial vaginosis on higher side when be compare it with laboratory diagnosis while in case of candidiasis and trichomoniasissydromic approach results are quite satisfactory so we can conclude that syndromic approach has high sensitivity and specificity for candiadiasis and trichomoniasis but in case of bacterial vaginosis it has high sensitivity but low specificity. It is required to go for laboratory test in case of suspected bacterial vaginosis patient for confirmation and further appropriate treatment.

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