

Syndromic approach for diagnosis of reproductive tract infections among women attending gynaecology OPD in a teaching hospital

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Abstract

Background: Reproductive tract infections are major health problem around the world especially in developing countries. WHO has recommended a syndromic management of reproductive tract infections, which is based on symptoms and clinical signs. **Aim:** To employ syndromic approach for the diagnosis of reproductive tract infections. **Material and Methods:** A total of 300 patients with reproductive tract infections were subjected for clinical examination based on symptoms and sign and use the flow chart describe by WHO. Per vaginal and per speculum examination was done. **Results:** On the basis of syndromic diagnosis, out of 300 cases, most commonly diagnosed syndrome was vaginal discharge syndrome (28.67%) followed by lower abdominal pain syndrome (17.33%). No cases of genital ulcers and genital warts were reported. **Conclusion:** Syndromic approach was found to have a moderate diagnostic accuracy in detecting vaginal discharge syndrome and pain abdomen syndrome. Syndromic diagnosis is low cost effective, more acceptable and easily available at primary and secondary health centre.

Key Words: Reproductive tract infections, syndromic approach, vaginal discharge syndrome, lower abdominal pain syndrome

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INTRODUCTION

Reproductive tract infections (RTIs) are one of the most common and major health problem around the world and they are much more widespread in developing countries than in developed countries due to an inadequate health services.¹ These infections cause suffering and distress

for both women and men around the world but their consequences are far more devastating and widespread among women than men.^{2,3} The World Health Organization (WHO) describes the syndromic approach, based on signs and symptoms, for diagnosis of RTIs at primary health level. Syndromic diagnosis is done when advanced laboratory facilities are not available. Through this approach a health worker at the most peripheral level without using laboratory support, can diagnose these infections and accordingly prescribe treatment or advise referral of the patient.^{4,5} Most of these women with RTIs are asymptomatic for long periods. Early diagnosis and treatment of these infections can prevent serious complications and long term sequelae affecting the quality of life. The purpose of this study was to employ syndromic approach for the diagnosis of reproductive tract infections.

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MATERIAL AND METHODS

This prospective study was conducted at Department of Obstetrics and Gynecology of a tertiary care teaching hospital over a period of two years. Informed consent was taken from 300 patients with reproductive tract infections patients who were included in this study for the selection criteria.

Inclusion criteria

- Women of reproductive age group (20-45 years)
- Women presenting with various symptoms and signs of RTIs such as vaginal discharge, pain in lower abdomen and genital ulcer.

Exclusion criteria

- Unmarried women.
- Women with pregnancy and any uterine pathology.
- Patient with bleeding per vagina.
- Diagnosed genital malignancy.
- Patient not given valid consent.

Methodology

Detailed history including menstrual, obstetric and sexual history of the patients were taken and general, physical and local examination was done and clinical symptoms and sign were noted. All reproductive tract infection patients were subjected for clinical examination based on symptoms and sign and use the flow chart describe by WHO. The patient was made to lie down in dorsal position. Then local examination was done. Inspection of vulva for edema, congestion, scratch mark or any ulcer was carried out. Speculum examination was done after swabbing the perineum with boiled water (no antiseptic or lubricant was used). Condition of vagina, presence of congestion, petechial hemorrhages on vaginal wall were noted. Condition of cervix presence of congestion or erosion of cervix, cervicitis, endocervicitis, cervical growth or ulcer were looked for. After introducing

speculum into the vagina culture from posterior fornix of the vagina was taken with sterile swab stick and send for culture and sensitivity. PH of vaginal discharge noted by PH strips dipped in vaginal discharge, change in color was noted. Discharge collected on the posterior blade of speculum was taken on the different glass slides for the preparation of different tests (wet mount, KOH mount-whiff test, Gram's staining) and pap's smear taken with help of ayre's spatula. The odour of the discharge was noted and also did whiff test for bacterial vaginosis, and types of color and nature of discharge also noted. Internal examination (per vaginal) was done to find out the size, shape of uterus and rule out the tenderness and masses in the fornix and all patients underwent USG to rule out the pelvic pathology.

RESULTS

The maximum number of patients 145 (48.33%) were in the age group 31-40 years while 43% in age group 20-30 years and 8.67% in age group >40 years. The mean age of the study group was 31.52±6.085 years. The present study showed that the rural women were more suffered than urban (60% vs 40%). 285 (95%) patients were married, while 4% had divorcee and only 1% were widow. Out of 300 cases 31.67% were educated till secondary, 20% were having primary education, 15.33% were illiterate and higher education holder were 17.67%. Maximum number of patients 99 (33%) were para 2 and 30.33% patients were multiparous women (>P3), 68 (22.67%) patients were primipara women while 14% patients had no children (nulliparous). Out of 300 patients, 296 (98.67%) presented with vaginal discharge while 40% patients had pain in lower abdomen, 20% patient with pruritus vulva, 18% patient with dyspareunia and 1.33% patients presented with foul smelling.

Table 1: Distribution of the cases according to chief complains

Chief Complaints	No. of cases	Percentage (%)
Vaginal Discharge	296	98.67 %
Pain lower abdomen	120	40.00 %
Pruritus vulva	60	20.00 %
Dyspareunia	54	18.00 %
Foul smelling	4	1.33 %

Out of 300 patients 97 (32.33%) presented with the physiological vaginal discharge, 117 (39%) presented with excessive homogenous thin watery discharge, 79 (26.33%) patient had thick curdy white discharge. 7 (2.33%) patient had green frothy discharge with foul smelling.

Table 2: Per speculum findings (Syndromic)

Per speculum finding	No. of cases	Percentage (%)
Normal	97	32.33%
Thin Watery Discharge	117	39%
Thick Curdy White Discharge	79	26.33%
Green frothy discharge foul smelling	7	2.33%
Total	300	100%

On per vaginal examination, 249 (83%) were normal, 10.33% cases presented with normal uterus with tenderness in fornix and 6.67% cases presented with bulky uterus with tenderness in fornix. Tenderness were present in 17% cases.

Table 3: Per vaginal findings (Syndromic)

Per vaginal finding	No. of cases	Percentage (%)
Normal	249	83%
Uterus bulky + Tenderness in fornix	21	7%
Uterus normal size + Tenderness in fornix	31	10.33%
Total	300	100 %

Out of 300 cases 186 (62%) cases were normal, 32.33% cases were inflammatory, 2% bacterial vaginosis, 2.33% candidiasis, 0.67% trichomoniasis and 0.67% were low grade squamous epithelial lesion (LSIL).

Table 4: Distribution of the cases according to Pap Smear

Pap smear	No. of cases	Percentage (%)
Normal	186	62%
Inflammatory	97	32.33%
Inflammatory, bacterial vaginosis	6	2%
Inflammatory, candidiasis	7	2.33%
Inflammatory, trichomoniasis	2	0.67%
low grade squamous epithelial lesion (LSIL)	2	0.67%
Total	300	100%

Out of 300 cases most commonly diagnosed syndromes were vaginal discharge syndrome (54%) followed by lower abdominal pain syndrome (17.33%). No cases of genital ulcers and genital warts were reported.

Table 5: Distribution of the cases according to Syndromic Diagnosis

Syndromic diagnosis	No. of cases	Percentage (%)
Normal	86	28.67%
Vaginal discharge syndrome (VDS)	162	54%
Lower Abdomen Pain Syndrome	52	17.33%
Genital warts	0	0%
Genital Ulcers	0	0%
Total	300	100%

DISCUSSION

Majority of RTIs patients present themselves at the age group of 31-40 yrs. The vulnerability of this age group is mostly due to the infections caused during laceration or trauma encountered during delivery and coitus, along with repeated child births and abortions. Vaginal discharge was the most common symptom reported by my patients. This is due to the fact that awareness related to RTIs and health seeking behavior is inadequate among them. Excessive vaginal discharge was reported, due to menstrual disorders and unhealthy cervix leading to cervical erosion and infections leading to abdominal pain. Abdominal pain can be explained by associated pelvic congestion. Also the presence of backache and pain abdomen indicates the presence of sub clinical involvement of surrounding tissues or irritation of para-cervical nerves by chronic infections. Hawkes *et al*⁶ in their study 94% women reported with abnormal vaginal discharge, 40% reported with lower abdominal pain, 55% were having genital itching and genital ulceration was present in 1% of cases. Patnaik *et al*⁷ concluded that vaginal discharge syndrome is the most commonly diagnosed syndromic diagnosis. Shethwala *et al*⁸ showed that the most common symptom reported was vaginal discharge 147 (98%), followed by lower abdominal pain

114 (76%), menstrual abnormality 27 (18%). Bote *et al*⁹ found in their study that major symptom reported was vaginal discharge. Ghebremichael *et al*¹⁰ found in their study that the most prevalent STIs symptoms was lower abdominal pain (16%), followed by itching in the genital area (15%), pain during intercourse (9.4%), abnormal genital discharge (6.3%), burning or pain on micturation (6%), excessive genital secretions (4.1%), foul smell in genital area (3.2%), swelling of lymph nodes in genital area (1.9%), and genital ulcers (1.1%). Prabha *et al*¹¹ in their study found no complaint of genital ulcer and genital warts. Ray *et al*¹² in their study found none with complained of genital ulcers and growths. In our study, on per speculum examination, out of 300 patients 97 (32.3%) had normal vaginal discharge while 117 (39%) presented with excessive homogenous thin watery discharge, 79 (26.33%) patient had thick curdy white discharge. 7 (2.33%) patient had green frothy discharge with foul smell. Majority of types of discharge are homogenous thin watery discharges because most of the patients are sexually active in their reproductive age group. Thin watery discharge is a characteristic of bacterial vaginosis. Bacterial vaginosis is a sexually transmitted disease. Shethwala *et al*⁸ showed in their study that most of patients presented with homogenous

white discharge 43 (28.7%) cases, 42 (28%) presented with curdy white discharge and showed that cervical erosion (43.3%) was the commonest among all the clinical signs observed among the patients. On per vaginal examination, out of 300 cases 249 (83%) were normal, 10.3% cases presented with normal size uterus and tenderness in fornix and 6.67% cases presented with bulky uterus and tenderness in fornix. Fornicial tenderness was present in cases 17%. In women tenderness was most common with lower abdominal pain. This indicated that awareness of RTIs and health seeking behavior is inadequate in those women. Excessive vaginal discharge was because of erosion of cervix, pain in abdomen, back pain and menstrual disorders. Presence of back ache and pain in abdomen indicated the possibility of sub clinical involvement of surrounding tissues or irritation of para-cervical nerves by chronic infections. Pain in abdomen can be explained by associated pelvic congestion and tenderness. In present study, out of 300 cases, most commonly diagnosed syndrome was vaginal discharge syndrome (54%) followed by lower abdominal pain syndrome (17.3%). No cases of genital ulcers and genital warts were reported. Prabha *et al*¹¹ prevalence of reproductive tract infections/sexually transmitted infections by syndromic diagnosis was 61.9%. The most common syndromes diagnosed is vaginal discharge syndrome (34%) followed by lower abdominal pain syndrome (28%). No cases of genital ulcers and genital warts were reported. Shah *et al*¹³ In their study out of 233 patients 183 (78.54%) of was having vaginal discharge syndrome.

CONCLUSION

Syndromic approach was found to have a moderate diagnostic accuracy in detecting vaginal discharge syndrome and pain abdomen syndrome. Syndromic diagnosis is low cost effective, more acceptable and easily available at primary and secondary health centre. It should be continued as first line management.

REFERENCES

1. Rabiun KA, Adewunmi AA, Akinlusi FM, Akinola OI. Female reproductive tract infections: understandings and care seeking behaviour among women of reproductive age in Lagos, Nigeria. BMC women's health. 2010 Mar 23;10(1):8.

2. World Health Organization. Prevention and control of sexually transmitted infections: draft global strategy: report by the Secretariat. In: Prevention and control of sexually transmitted infections: draft global strategy: report by the Secretariat 2006.
3. World Health Organization. Reproductive health strategy to accelerate progress towards the attainment of international development goals and targets.2004,Geneva:14-19.
4. Government of India, Ministry of Health and Family Welfare. Simplified RTI and STI treatment guidelines. National AIDS Control Organization, New Delhi, 1999.
5. World Health Organization. Management of patients with sexually transmitted diseases. Report of a WHO Study Group. WHO Technical Report Series 810, WHO, Geneva 1991.
6. Hawkes S, Morison L, Foster S, Gausia K, Chakraborty J, Weeling R, Mabey D. Reproductive-tract infections in women in low-income, low-prevalence situations: assessment of syndromic management in Matlab, Bangladesh. The Lancet. 1999 Nov 20;354(9192):1776-81.
7. Patnaik L, Sahu T, Sahani NC. Syndromic diagnosis of RTI/STI among women of reproductive age group. Indian J Community Med 2008;4(1).
8. Shethwala N, Mulla S. Study on reproductive tract infection among the female patients attending the gynecology OPD in a teaching hospitals of Gujarat-India. Int J Med Sci Public Health 2014;3(1):123-125.
9. Bote MM, Bedre RC, Solanki HB, Shenoy AG, Suryawanshi SR. Syndromic Diagnosis vs. Laboratory Diagnosis of Reproductive Tract Infections among Married Women of Reproductive Age Group in Urban Slum of Mumbai. Community Med 2015;6(4):513-8.
10. Ghebremichael M. The syndromic versus laboratory diagnosis of sexually transmitted infections in resource-limited settings. ISRN AIDS. 2014 Mar 5;2014.
11. Prabha ML, Sasikala G, Bala S. Comparison of syndromic diagnosis of reproductive tract infections with laboratory diagnosis among rural married women in Medak district, Andhra Pradesh. Ind J Sex Transm Dis 2012 Jul;33(2):112.
12. Ray K, Muralidhar S, Bala M, Kumari M, Salhan S, Gupta SM, Bhattacharya M. Comparative study of syndromic and etiological diagnosis of reproductive tract infections/sexually transmitted infections in women in Delhi. Int J Infect Dis 2009 Nov 30;13(6):e352-9.
13. Shah M, Deshmukh S, Patel SV, Mehta K, Marfatia Y. Validation of vaginal discharge syndrome among pregnant women attending obstetrics clinic, in the tertiary hospital of Western India. Ind J Sex Transm Dis 2014 Jul;35(2):118.

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