

Bacterial vaginosis

Dr. M. Barati

Prof. of Infectious D.

IUMS

1404

Sexually Transmitted Infections in Tehran

Maryam Afrakhteh ✉, Hadi Beyhaghi, Afshin Moradi, Seyed Jalil Hosseini, Atossa Mahdavi, Sima Giti, Shahrzad Zadeh Modarres, Zahra Zonoobi, Homeyra Masoomi

ABSTRACT

Objective: Sexually transmitted infections (STIs) remain a public health problem of major significance in most parts of the world. This study aimed to detect the most prevalent pathogens in patients with signs and symptoms of STI referring to a group of university clinics in Tehran.

Materials and methods: In this cross-sectional study using randomized cluster sampling, 507 consecutive male and female patients presenting with signs and symptoms of STI referring to selected health care centers of Shahid Beheshti University were evaluated between May 2005 and May 2007. Diagnosis was made according to WHO criteria for signs and symptoms of STI in addition to microscopic study of genital discharges.

Results: The most prevalent STI pathogens were Candida, Trichomona, Neisseria gonorrhoeae and Chlamydia with respective frequencies of 53.96%, 18.87%, 4.91% and 22.26% in women and 47.10%, 8.67%, 9.50% and 34.71% in men.

Conclusion: Candida was detected in majority of cases. Chlamydia was the most prevalent STI in both sexes. Simple preventive care has crucial role in decreasing the frequency of STIs in society.

Estimation of Prevalence and Incidence of Sexually Transmitted Infections in Iran; A model-based approach

Maryam Nasirian ¹, Mohammad Reza Baneshi ², Kianoush Kamali ³, Ali Akbar Haghdoust ⁴

Affiliations + expand

PMID: 26411663

Abstract

Background: Routine reporting of sexually transmitted infections (STIs) in Iran is one of the main information sources on STIs, endures some diminution under influence of several factors. We aimed to adjust registered STI data with a model-based approach and estimate the incidence and prevalence of STIs in Iran.

Methods: In this cross-sectional study, we developed a stochastic compartmental model considering effects of influential factors on STI reporting process to adjust registered STI data. We reviewed literature and used Delphi method to collect data and estimate model parameters. We calibrated the model using Monte Carol simulation with 95% confidence interval (CI). Finally, we validated the models by comparing their output with investigational data.

Results: The estimated prevalence of male urethral discharge was 0.40% (95% CI: 0.26%, 0.65%); the prevalence of genital ulcers was 3.68% (95% CI: 2.31%, 6.43%) in women and 0.16% (95% CI: 0.10%, 0.27%) in men. The estimated incidence for *Neisseria gonorrhoeae*, *Chlamydia trachoma* and syphilis per 1000 women was 2.44 (95% CI: 1.17, 6.65), 5.02 (95% CI: 2.78, 10.16) and 0.04 (95% CI: 0.02, 0.05) respectively; the corresponding figures per 1000 men were 0.43 (95% CI: 0.26, 0.80), 0.82 (95% CI: 0.42, 1.92) and 0.005 (95% CI: 0.003, 0.008).

Conclusions: Various factors are responsible for the obvious underestimation in the number of STIs registered in Iran. Notwithstanding this underestimation, our models offer an indirect method of estimating the prevalence of STIs in the country. Providing policymakers and STI experts with more realistic estimates might prompt policymakers and STI experts to recognize the importance of STIs in Iran and help them to develop appropriate prevention and control programs.

Case definition:

- A 35 y women with vaginal discharge since 2 w ago
- No perivaginal irritation, dysuria and dyspareunia
- vaginal odor
- No perivaginal erythema/ irritation
- PH=5
- Clue cell

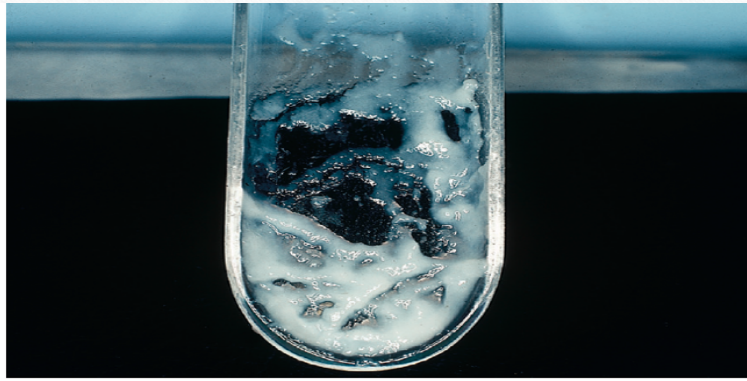


FIG. 108.2 Healthy vaginal secretions on a speculum. Normal vaginal secretions on a plastic vaginal speculum. The secretions are off-white and heterogeneous.

TABLE 108.1 Characteristics of Normal Vaginal Secretions

Heterogeneous suspension of desquamated vaginal epithelial cells in water
 Lactobacilli dominate the microbiota
 pH of 3.5–4.6
 Odorless
 Do not cause itching or irritation
 Usually do not soil underclothing

TABLE 108.2 Characteristics of Patients Who Report Vaginal Symptoms but Are Found to Have Normal Vaginal Secretions

Chronicity of symptoms
 Many prior visits to health care practitioners
 Multiple ineffective treatments with vaginal and oral antimicrobial agents
 Absence of odor
 Absence of itching and irritation
 Minimal, if any, staining of clothing

TABLE 108.3 Differential Diagnosis of the Abnormal Vaginal Discharge

Normal (physiologic) vaginal secretions
 Vaginal infections
 Trichomoniasis
 Vulvovaginal candidiasis
 Bacterial vaginosis
 Desquamative inflammatory vaginitis
 Cervicitis
 Infectious
 Noninfectious
 Estrogen deficiency

APPROACH TO THE PATIENT

- **History**
- **Mode of Onset**
- **Quantity of Discharge**
- **External Irritation**
- **Pruritus**
- **Odor**
- **Abdominal Pain**
- **Sexual History**

Physical Examination

- Diffuse perineal erythema
- severe perivaginal irritation
- Labial edema

Diagnostic Evaluation

- Vaginal pH
- A sample of vaginal secretions
- odor (whiff test)
- wet mount
- clue cells

TABLE 108.12 Symptoms Associated With Bacterial Vaginosis

Homogeneous vaginal discharge
Fishy vaginal odor during menstruation or after intercourse
Minimal itching or irritation

TABLE 108.13 Criteria for the Diagnosis of Bacterial Vaginosis

Homogeneous vaginal discharge
Vaginal pH >4.6
Positive whiff test with 10% potassium hydroxide
Clue cells

Treatment

symptomatic women: 1- relieve their symptoms, 2- prevent acquisition of other STDs(chlamydia, gonorrhea, HIV, HSV-2, and trichomoniasis)

1- oral metronidazole, 500 mg/12h for 7 d

2- Vaginal preparations containing 0.75% metronidazole gel or 2% clindamycin cream, or ovules containing 100 mg of clindamycin

3- Secnidazole (a nitroimidazole approved by FDA in September 2017), 2-g single oral.

4- Oral clindamycin

5- oral tinidazole 1 g / d for 5 d. or 2 g/ d for 2 d

6- metronidazole 750-mg extended-release tablets/ d for 7 d and a single dose of

Treatment failures :

1- normal *Lactobacillus*-dominated microbiota fails to become reestablished

2- persistence of *G. vaginalis* in biofilms on the vaginal wall

- Multiple recurrences: 0.75% Metrogel twice a week for 4 to 6 months or monthly oral metronidazole 2 g with fluconazole 150 mg
- Unresponsive : intravaginal boric acid, 600 mg at bedtime
- Probiotics
- **screen** and treat women with BV before performing induced abortion or hysterectomy and invasive gynecologic procedures

Others

- Pregnant women:
 - symptomatic
 - adverse pregnancy outcomes: premature membrane rupture, early labor, preterm birth, and postpartum endometritis.
 - Asymptomatic: previously delivered a premature infant
 - oral metronidazole or oral clindamycin (Topical agents do not appear to be as effective as oral agents, and the use of clindamycin cream has been associated with adverse events such as prematurity and neonatal infections)
- male sexual partners:

The NEW ENGLAND JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

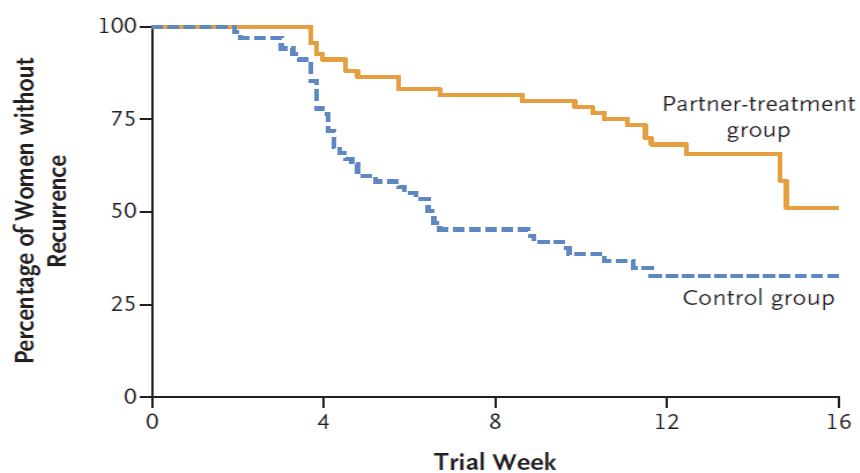
MARCH 6, 2025

VOL. 392 NO. 10

Male-Partner Treatment to Prevent Recurrence of Bacterial Vaginosis

Lenka A. Vodstrcil, Ph.D.,^{1,3} Erica L. Plummer, Ph.D.,^{1,2} Christopher K. Fairley, Ph.D.,^{1,2} Jane S. Hocking, Ph.D.,³
Matthew G. Law, Ph.D.,⁴ Kathy Petoumenos, Ph.D.,⁴ Deborah Bateson, M.D.,⁵ Gerald L. Murray, Ph.D.,⁶⁻⁸
Basil Donovan, M.D.,⁴ Eric P. F. Chow, Ph.D.,^{1,3} Marcus Y. Chen, Ph.D.,^{1,2} John Kaldor, Ph.D.,⁴ and
Catriona S. Bradshaw, Ph.D.,^{1,3} for the StepUp Team*

- randomized, controlled trial (StepUp) to determine whether concurrent oral and topical antimicrobial treatment of male partners of women receiving first-line therapy for bacterial vaginosis, as compared with treatment of the woman only (standard care), reduces the risk of recurrence at 12 weeks.



No. at Risk				
Partner-treatment group	69	61	50	31
Control group	68	51	27	11

Figure 2. Kaplan–Meier Curves for Time to Recurrence of Bacterial Vaginosis (Modified Intention-to-Treat Population).