

Prevalence of causes of vaginal discharge: an integrative literature review

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ABSTRACT

Introduction: Complaints related to vaginal infections account for 40% of gynecological consultations and are characterized by leukorrhea, itching, burning sensation, and foul odor. These pathologies have behavioral aspects as their main risk factors. Therefore, it is essential to continuously improve the quality of epidemiological information. **Objective:** to conduct a survey of data on the prevalence of these infections through studies published in the thesis and dissertation databases of the Federal University of Goiás (UFG), Pontifical Catholic University of Goiás (PUC-Goiás), and University of Brasília (UnB). **Methodology:** This is an integrative literature review, with studies searched on the institutional thesis and dissertation databases of the UFG, PUC-Goiás, and UnB universities. A total of nine studies were selected. **Results:** Vulvovaginal candidiasis had discharge, itching, and burning as the main symptoms reported. Bacterial vaginosis had the highest prevalence and was associated with abnormal vaginal discharge, which was statistically significant for diagnosis, as well as with the use of vaginal douching. Condom use was a protective factor against trichomoniasis, and PCR was the most specific diagnostic method. Cervicitis was associated with non-use or irregular use of condoms and had a lower prevalence. **Conclusion:** Suggestive clinical findings are the main indicators of etiology, and behavioral and sociodemographic aspects did not show significant differences for most causes of vaginal discharge.

Keywords: Vulvovaginitis; prevalence; gonorrhoea; trichomoniasis.

INTRODUCTION

Vaginal discharge is one of the most common clinical complaints among women of reproductive age and can be attributed to multiple etiologies. It is the second most common problem after menstrual disorders and one of the main reasons women seek gynecological consultation. Complaints related to vaginal infections account for 40% of gynecological consultations and are characterized by leukorrhea, itching, burning sensation, and mal smell. It should also be noted that this

complaint is the main symptom reported by patients seeking services for sexually transmitted infections (STIs). (RAUGUST; DUARTE, 2013; BRAZIL, 2020).

Abnormal vaginal discharge is usually associated with infectious conditions of the reproductive tract, among which vulvovaginitis stands out: bacterial vaginosis (BV), which is mainly caused by the bacterium *Gardnerella vaginalis*; trichomoniasis, which is caused by the protozoan *Trichomonas vaginalis*; and vulvovaginal candidiasis (VVC), caused by the fungus *Candida sp.* Cervicitis, whose etiological agents are mainly *Chlamydia trachomatis* and *Neisseria gonorrhoeae*, when symptomatic, is another group of diseases that causes vaginal discharge, which is one of the main complaints. These pathologies have as risk factors mainly behavioral aspects related to sex, the number of sexual partners, the number of sexual relations per week, alcohol and tobacco consumption, the use of tight clothing, lack of hygiene, among others. (RAUGUST; DUARTE, 2013; BRAZIL, 2020; FEBRASGO, 2018).

In view of the above, this study aimed to collect data on the prevalence of these infections through studies published in the thesis and dissertation databases of the Federal University of Goiás (UFG), Pontifical Catholic University of Goiás (PUC-GO), and University of Brasília (UnB).

METHOD

This work is an integrative literature review developed on the theme: "The prevalence of complaints of vaginal discharge and its main causes." The search for studies was carried out on the institutional platforms of thesis and dissertation databases at UFG, PUC-GO, and UnB. The research was conducted in each repository individually for each of the following terms: vaginal discharge, bacterial vaginosis, chlamydia, gonorrhea, trichomoniasis, and vulvovaginal candidiasis. The studies were selected by checking the titles and abstracts that matched the theme of the study, with a total of nine studies separated for analysis.

RESULTS

The selected studies were categorized according to the etiological diagnosis of the causes of vaginal discharge, which were: vulvovaginal candidiasis; trichomoniasis; bacterial vaginosis; cervicitis.

Vulvovaginal candidiasis

Among the nine studies included in this review, three addressed CVV. The studies consisted of two master's theses and one doctoral thesis, in the cities of Goiânia (GO) and Brasília (DF). Of the studies analyzed, two found that sociodemographic and behavioral aspects did not show statistically significant differences in the occurrence of CVV, however, one of the studies found that factors such as consumption of milk and dairy products, changes in bowel habits, use of hormonal contraceptives, respiratory allergies, and use of daily panty liners had a significant difference in laboratory diagnosis (CAMARGO, 2014; SOUSA, 2019; PEREIRA, 2021).

The studies also evaluated the clinical aspects of vaginal discharge. In the study by Camargo (2014), 16.6% of the women in the sample had discharge suggestive of VVC, with 26% of these cases confirmed by cytological diagnosis. In the study by Souza (2019), 5.4% of the study population had VVC, with significant differences found for complaints of vaginal discharge, amine odor, itching, and burning. In agreement with this, the study by Pereira (2021) found that 50.3% of the study population reported the presence of discharge, pruritus, and burning simultaneously. Furthermore, this same study found that of the patients who were symptomatic (62.2%), 53.2% tested positive in laboratory tests.

Bacterial vaginosis

Regarding BV, three of the selected studies addressed this cause, all of which were conducted in the city of Goiânia (GO). The studies analyzed were two master's theses and one doctoral thesis. In view of the sociodemographic and behavioral/reproductive aspects, the study by Souza (2019) did not find a significant difference. In contrast, in the study by Camargo (2014), the report of STIs and vaginal douching had a statistically significant association.

Regarding the prevalence of BV, two studies reported prevalence rates of 25.5% and 27.7%. Reports of abnormal vaginal discharge suggestive of BV were observed in 34.8% of one of the studies, and this complaint was identified in another study as statistically significant for diagnosis. In addition, in the y evaluation of Amsel's criteria, grayish, fluid vaginal discharge with or without bubbles was observed in 96.4% of women with BV (CAMARGO 2014; SOUZA 2019; CAMARGO 2022).

Trichomoniasis

Regarding trichomoniasis, four studies discussed the prevalence of *Trichomonas vaginalis* infection, including three master's theses and one doctoral thesis, which focused on women in the cities of Goiânia (GO) and Brasília (DF). In terms of prevalence, the study conducted in Brasília found 16% of samples to be positive, with 57% of these presenting vaginal discharge as the most common complaint. In contrast, one of the studies conducted in the city of Goiânia reported a prevalence of 0.3% when the report of discharge was suggestive of trichomoniasis, but 1.7% of negative cases by clinical indication were confirmed by cytological examination (CAMARGO 2014; GLEHN 2016; LEMOS 2017; CAMARGO 2022).

Regarding sociodemographic and behavioral variables, the study by Camargo (2014) did not find statistically significant differences, however, the study by Glehn (2016) found condom use as a protective factor and a number of partners greater than 10 with significant differences. In the studies by Camargo (2022) and Lemos (2017), the PCR diagnostic method was evaluated for the diagnosis of STIs, with the first study showing 100% sensitivity and specificity for both, while the second study found that this method had lower sensitivity in non-pregnant women (23%) and higher sensitivity in HIV-positive women (54%) and specificity greater than 80% in all study groups.

Cervicitis

The cervicitis included in this study were gonorrhea and chlamydia. Three studies were analyzed, all of which were master's theses, two of which were on *Neisseria gonorrhoeae* and one on *Chlamydia trachomatis*. The studies covered the cities of Goiânia, Inhumas, Catalão, and Ceres, in the state of Goiás (LIMA, 2008; FONSECA, 2011; FERNANDES 2013).

The two studies that examine *N. gonorrhoeae* infection looked at different populations: one study covered adolescents and young adults, and the other covered women attending an infertility clinic. The prevalence among adolescents and young adults was 3.4%, with a mean age of 18.6 years and a statistically significant lack of condom use. The prevalence among women treated at the infertility clinic was 0.5%, with PID present in 100% of cases of infection (FONSECA, 2011; FERNANDES, 2013).

C. trachomatis infection had a prevalence of 10.9%, being more frequent and with a significant difference in adolescents and young people with the highest number of partners in their lifetime and who began sexual activity before the age of 15. In addition, among those who tested positive, the majority of women were single/divorced, had a steady partner, used condoms irregularly, and had less than 8 years of schooling (LIMA, 2008).

CONCLUSION

Vaginal discharge is a common complaint in women's health, and suggestive clinical findings are the main indicators of etiology. The profile of young, sexually active women with irregular condom use is associated with a higher prevalence of abnormal vaginal discharge; however, behavioral and sociodemographic aspects did not show a significant difference for most causes of vaginal discharge. The etiologies most associated with complaints of vaginal discharge were bacterial vaginosis and vulvovaginal candidiasis.

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