



ASSOCIATIONS BETWEEN FOUR DIFFERENT CHARACTERISTICS AND VAGINITIDES/VAGINOSES IN WOMEN WITH CHRONIC VAGINAL COMPLAINTS

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INTRODUCTION

Vaginal symptoms are the most common reason for visiting a specialized obstetric and gynecological clinic. Every third woman, visiting a STD specialist, is suffering from vaginitis or vaginosis. The traditional diagnosis of the syndrome “vaginal fluorine” is still challenging clinical experts and microbiologists. There are three basic concepts for the role of clinical symptoms in diagnosis of vaginitides and vaginoses: a diagnose, based solely on clinical symptoms; a diagnose, based solely on microbiological and molecular-biological methods; and a complex approach, based on certain microbiological and clinical symptoms, signs and criteria.

Aim:

Determining a correlation between four subjective clinical symptoms and the most common infectious vaginitides and vaginoses among a specific group of patients.

MATERIAL AND METHODS

We have studied 280 vaginal discharge samples of non-pregnant, non-menopausal women with chronic vaginal symptoms who visited actively the Obstetric and gynecological clinic at the Prehospital Medical Care in Plovdiv. The study is based on results from complex clinical, microbiological, epidemiological and statistical research methods.

Clinical: organoleptic and macroscopic test approach towards four clinical characteristics: odor testing, yellow testing, density rate of the vaginal discharge in the smear and vulvovaginal inflammation. Predefined standards have been applied to evaluation of yellow test and density rate (**Figure 1 and Figure 2**).

Microbiological: bacterial vaginosis (BV) – Nugent’s scoring system (1); cytolytic vaginosis (CV) – adapted system, incl. the microscopic criteria of Cibley & Cibley (2); vaginal lactobacillosis (LB) – microscopic criteria of Horowitz and associates (3); aerobic vaginitis (AV) – adapted system after Donders (4); vulvovaginal candidiasis (VVC) – original complex system.

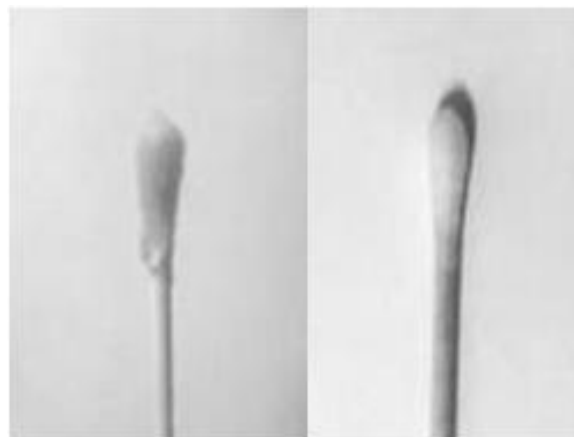


Figure 1. Yellow test criteria

established during case history study, clinical examination and laboratory testing.

Statistical: descriptive analysis; χ^2 square; logistic regression.

The methods of statistical analysis have been processed with the software SPSS v. 13.0. The results from the statistical analysis of the data on the researched clinical characteristics are based on an independent assessment, adopted by consensus by two medical specialists (T. D. and G. T.).

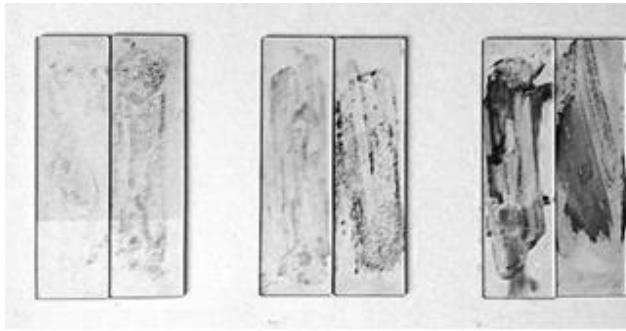


Figure 2. Density rate in the smear

Epidemiological: pre-prepared Primary Data Collection Sheet (PDCS) for registration of subjective symptoms, signs and characteristics,

RESULTS

Figure 3 shows associations between odor test and the most common vaginitides and vaginoses in the clinical practice

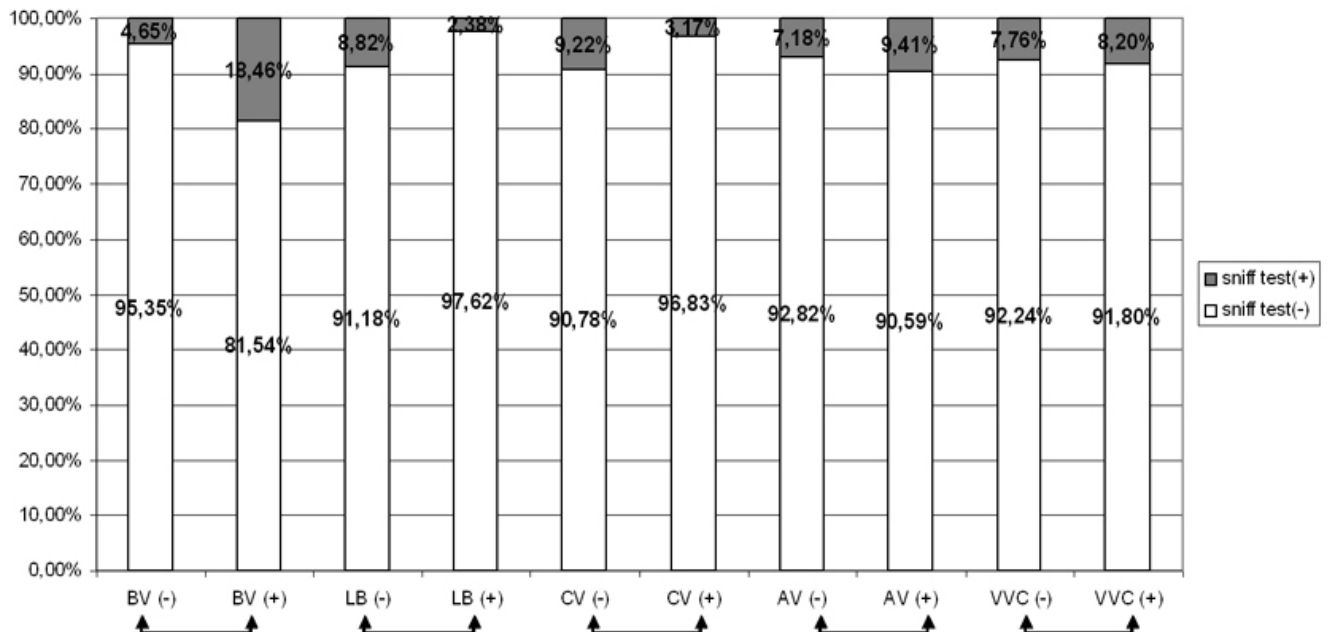


Figure 3. Odor testing

The results from the research confirmed the expectations of a marked association between bacterial vaginosis and a positive odor test in the study group of patients ($p < 0,05$). The positive odor test did not establish a statistically significant correlation between vaginal lactobacillosis (VLB), cytolytic vaginosis (CV), aerobic vaginitis (AV) and vulvovaginal candidiasis (VVC) ($p < 0,05$).

Figure 4 shows associations between yellow test and the studied clinical samples.

The results show a strong association between the positive yellow test and the cases of AV ($p < 0,001$), moderate association between positive yellow test and VLB, CV and VVC ($p < 0,05$) and no association between yellow test and BV ($p > 0,05$). Donders G and associates' research shows similar results (4). In an extensive study Anderson and Karasz reported an interesting and yet alarming fact: 45% of the practitioners interviewed by them accept the yellow vaginal discharge as a pathological characteristic of the fluorine (7).

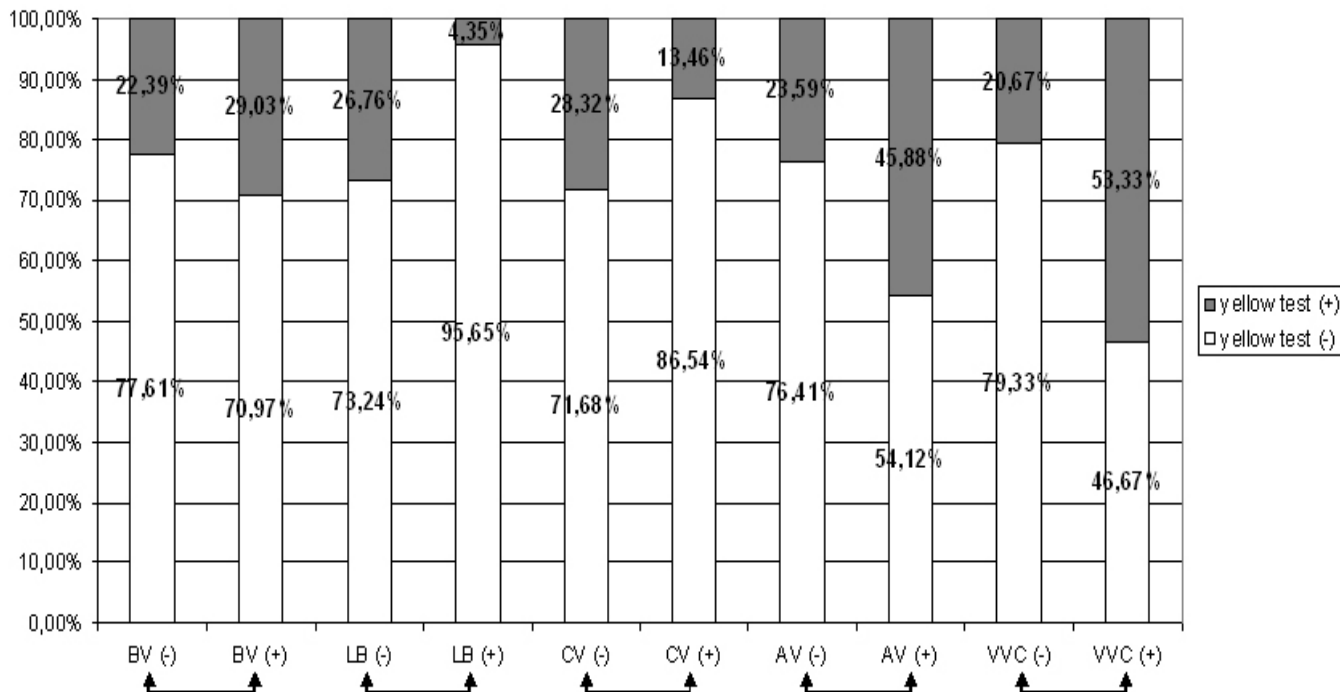


Figure 4. Yellow test

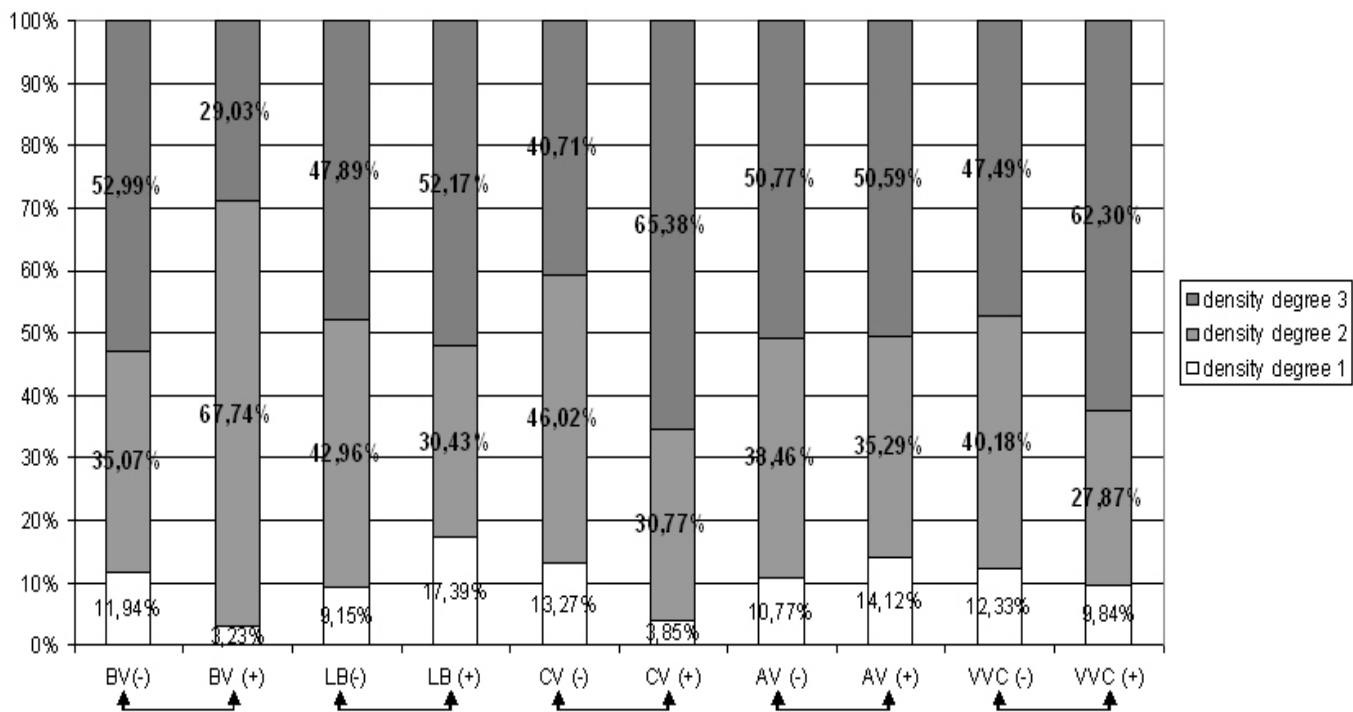


Figure 5. Density rates of the vaginal smear

We established a positive association between high density rates of vaginal smear from cases of BV and CV ($p < 0,05$). We did not confirm any correlation between the density rate of the vaginal smear from cases of VLB, AV and VVC

($p < 0,05$). The latter does not coincide with the concept of the better part of the medical practitioners, who believe that VVC should always be associated with presence of dense, curd-like vaginal discharge (2, 5, 6).

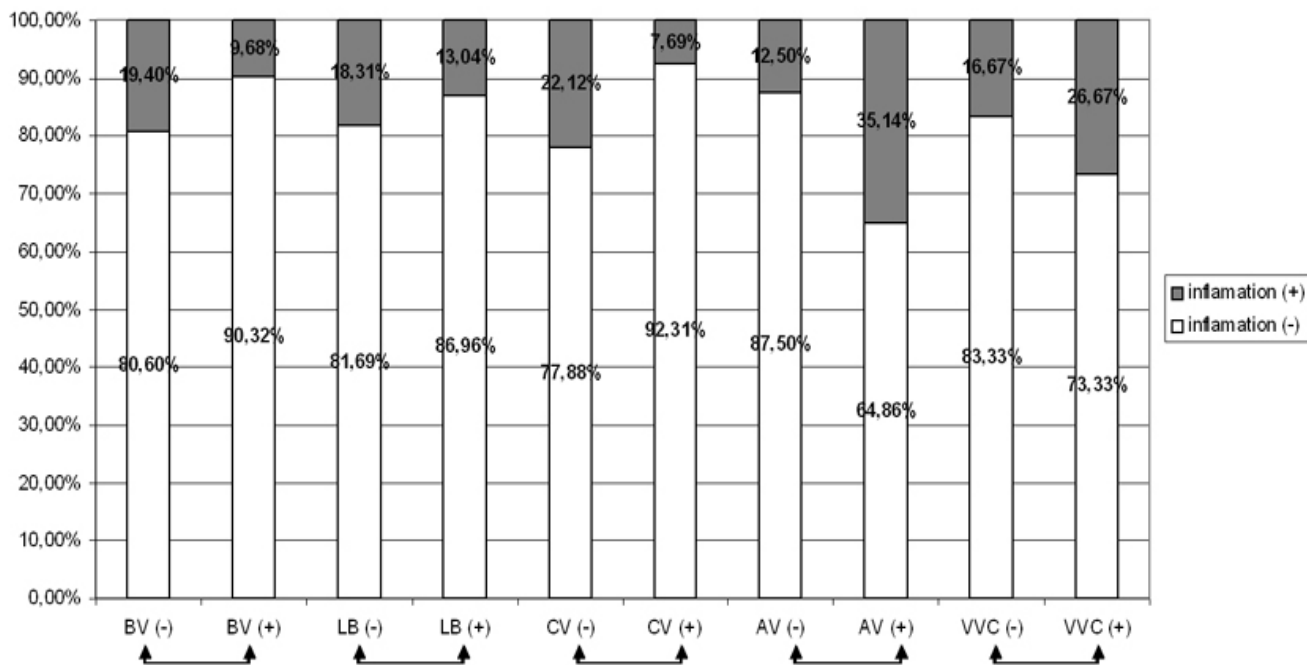


Figure 6. Inflammation

Concerning inflammation, a statistically significant difference between the study group with cytolytic vaginosis and the control group was established ($p < 0,05$). In the study group with CV signs of inflammation were registered in only 7.69%, while in the control group without CV – in 22.12%. The research showed a statistically significant correlation between AV and presence of inflammation ($p < 0,01$). Clinical signs of inflammation in the study group with AV are registered in 35.14% from the patients, while in the control group signs of inflammation are found in only 12.5%. In BV, VVC and VLB cases a statistically significant difference between the study group and the controlled group of patients was not established ($p > 0,05$).

Medical practitioners would traditionally “diagnose” a vaginal infection as VVC, BV and trichomoniasis (2, 8). Eckert and associates pay special attention to the fact that in VVC the subjective symptoms are not specific (9), while Ferris and associates succeed to confirm the diagnose VVC in only 33,7% of all women who selfdiagnosed and self-treated themselves with antifungals with no medical prescription. (10). The fungal culture is more expensive and delays the microbiological examination of VS but it is the only way to diagnose a VVC with certainty (11). Although empirical treatment based only on vaginal complaints is tempting, studies show

a weak correlation between clinical manifestation and etiological diagnose (11, 12, 13, 14).

CONCLUSION

Clinical symptoms are not the leading factor in diagnosis of infectious vaginitides and vaginoses, but some subjective characteristics still can be used as an additional criterion “for” or “against” the final microbiological diagnose. A positive odor test and a negative yellow test indicate bacterial vaginosis. The opposite, a negative odor test and a positive yellow test would confirm the diagnose aerobic vaginitis. Lack of positive association between high density rates of vaginal smear and vulvovaginal candidiasis indicates that this characteristic is not useful in diagnosis of this type of vaginitides in women with chronic vaginal complaints.

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