Accuracy of Self-collected Vaginal Swabs in the Diagnosis of Bacterial Vaginosis, Vaginal Candidiasis, and Trichomoniasis

Anna Chase
University of Southern Maine

Follow this and additional works at: https://digitalcommons.usm.maine.edu/thinking_matters
Part of the Obstetrics and Gynecology Commons

Recommended Citation
https://digitalcommons.usm.maine.edu/thinking_matters/203

This Poster Session is brought to you for free and open access by the Student Scholarship at USM Digital Commons. It has been accepted for inclusion in Thinking Matters Symposium by an authorized administrator of USM Digital Commons. For more information, please contact jessica.c.hovey@maine.edu.
Accuracy of self-collected vaginal swabs in the diagnosis of bacterial vaginosis, vaginal candidiasis, and trichomoniasis

Anna Frances Chase, RN, FNP Candidate
Mentor: Linda Samia, PhD, RN, Associate Professor of Nursing

Purpose

To answer the clinical PICOT question:
In patients who need vaginal swabs to diagnose bacterial vaginosis (BV), vaginal candidiasis (“yeast infections”), and trichomoniasis, are self-collected swabs as accurate as provider-collected swabs obtained during a speculum exam?

Background

• Vaginitis, or inflammation of the vagina, is the most common gynecological problem seen in primary care. It is estimated that it accounts for about 10 million primary care visits each year.1
• The most common causes of vaginitis - accounting for up to 90% of cases - are bacterial vaginosis (BV), vaginal candidiasis (“yeast infections”), and trichomoniasis.2,3

Evidence Appraisal

• Search of CINAL, Cochrane, and Google Scholar databases using the keywords self-collected, provider-collected, vaginal specimen OR vaginal swabs, reliability, bacterial vaginosis, vaginal candidiasis, and trichomoniasis yielded multiple case control studies published in English within the past 10 years
• Expanding the criteria to the past 20 years yielded a seminal study from 1997
• The overall sample was comprised of eight studies, all of which represent cohort studies with high quality evidence
• The studies were appraised by a single reviewer using validated tools and were determined to be of high quality

Evidence Synthesis

In sexually-active patients 14 years or older living in the US, self-collected vaginal swabs were as accurate as clinician-collected swabs at detecting vaginal candidiasis and BV infections; with $r \geq 0.84$ for BV and $r \geq 0.88$ for VVC indicating almost perfect agreement.2,4,5

• In patient populations with low literacy levels in India, self-swabs showed moderate agreement with provider-collected swabs for the diagnosis of BV, $r \geq 0.48$ 8

• There was high agreement between self and clinician-collected vaginal specimens in diagnosis of trichomoniasis, in sexually active patients $r \geq 0.87$ 1,5,7

• Self-swabs used for STI screenings were as accurate at diagnosing trichomoniasis as clinical obtained swabs 1

• Patients reported self-collection of vaginal swabs to be easy to obtain4

• Symptoms were found to be a poor indicator of underlying infection2

A self-taken swab alone is not adequate to diagnose etiology of vaginitis, a history physical exam may also be needed.10

Translation to Practice

• Educate providers on evidence of reliability of self-swabs and appropriate clinical situations for their use

• Train all clinical staff regarding patient education and the appropriate procedure for collecting self swabs

• Provide educational materials and instructions for self-swabs to patients

Proposed Evaluation

Complete a chart audit for the past 6 months to assess the number of patients who were tested for BV, yeast infections, and trichomoniasis and quantify outcomes of the testing. Track BV, yeast infections, and trichomoniasis testing over the next 6 months, the number of patients who opt for self-swabs, and the results.

Conclusion

• Self-taken vaginal swabs are as accurate and reliable as provider-collected swabs in diagnosing BV, yeast infections, and trichomoniasis in sexually active patients over the age of thirteen 2,3,4,5,6,7,8

• They can safely be offered as an alternative to provider-collected swabs in diagnosing BV.3

• Vaginal swabs self-collected for the screening of chlamydia and gonorrhoea may be an appropriate alternative to a provider-collected swab in the diagnosis of trichomoniasis.1 Indicating that testing could be done during routine STI screening, which has important implications for low-access areas.1

• With proper instruction, self-collection of vaginal swabs may be an easy experience for patients.8

• When deciding which patients to offer self-collected swabbing to, providers should keep in mind that symptoms are a poor indicator of underlying infection and self-swabs do not replace a physical exam, 2,10

• Further research is needed to determine the accuracy of self-swabbing in non-sexually active patients.

References


